



## QUIZZES

### Practice Test No. 1



3 Questions



5 min

Topics

Concepts in Homeostasis

[Start Quiz](#)





1/3



5 min



Hint

Q : The protection of internal environment from the harms of fluctuations in external environment is:



Osmoregulation



Excretion



Thermoregulation



Homeostasis





2/3



5 min



Hint

Q : Homeostasis maintains the internal environment:

A

Constant at fixed point

B

Within narrow range

C

Within broad range

D

Beyond any range



3/3



5 min



Hint

Q : The check and balance mechanism of homeostasis is called:



Regulatory system



Feedback system



Osmoback system



Thermoback system



Correct



Unattempted



Incorrect



1/3

Q : The protection of internal environment from the harms of fluctuations in external environment is:



Osmoregulation



Excretion



Thermoregulation



Homeostasis

## Explanation

Internal conditions are maintained in a narrow range as compared to the external environment. Such as temperature, salt, water and nitrogenous waste.





Incorrect



2/3

Q : Homeostasis maintains the internal environment:

A

Constant at fixed point

B

Within narrow range

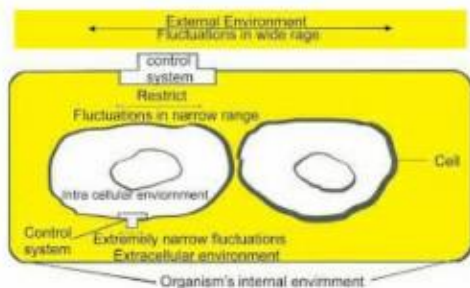
C

Within broad range

D

Beyond any range

## Explanation





Correct



Unattempted



Incorrect



3/3

Q : The check and balance mechanism of homeostasis is called:



Regulatory system



Feedback system



Osmoback system



Thermoback system

## Explanation

The process in which the mechanism is itself controlled by the product of that reaction is called feedback mechanism.





## QUIZZES

### Practice Test No. 2



5 Questions



5 min

#### Topics

Osmoregulation, Osmoregulation in Plants,  
Osmoregulation in Animals, Water Relations  
of Cell

[Start Quiz](#)



1/5



5 min



Hint

Q : Which of the following is osmoregulation?

A

Gain or loss of water

B

Elimination of wastes

C

Maintenance of temperature

D

Egestion of undigested wastes



2/5



5 min



Hint

Q : If an RBC is placed in hypotonic solution then it will:



Shrink



Burst



Remain same



Remove water in the surrounding





3/5



5 min



Hint

Q : The more concentrated external environment is termed as:



Hypotonic



Hypertonic



Isotonic



Peritonic



4/5



5 min



Hint

Q : In mesophytes, the loss of water in the form of water vapours is called:

A

Guttation

B

Transpiration

C

Imbibition

D

Translocation



5/5



5 min



Hint

Q : In sharks and rays the excess salts are removed by special glands present in their:



Gills



Skin



Mouth



Rectum



Correct



Unattempted



Incorrect



1/5

Q : Which of the following is osmoregulation?



Gain or loss of water



Elimination of wastes



Maintenance of temperature



Egestion of undigested wastes

## Explanation

The mechanism of regulation, generally between organism and its environment of solute and the gain and loss of water is called osmoregulation.





Incorrect



2/5

Q : If an RBC is placed in hypotonic solution then it will:

A

Shrink

B

Burst

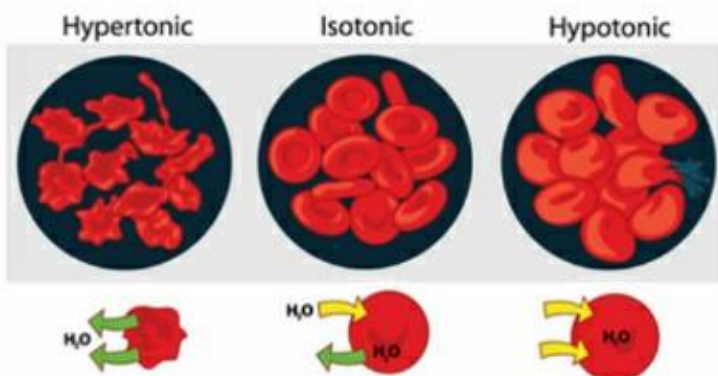
C

Remain same

D

Remove water in the surrounding

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : The more concentrated external environment is termed as:



Hypotonic



Hypertonic



Isotonic



Peritonic

## Explanation

The environment with higher solute concentration is hypertonic while with lower solute concentration is called hypotonic.



Correct



Unattempted



Incorrect



4/5

Q : In mesophytes, the loss of water in the form of water vapours is called:



Guttation



Transpiration



Imbibition



Translocation

## Explanation

The loss of water from the plants body via evaporation is called transpiration.





Correct



Unattempted



Incorrect



5/5

Q : In sharks and rays the excess salts are removed by special glands present in their:



Gills



Skin



Mouth



Rectum

## Explanation

Rectal Gland is epithelial tissue gland which concentrates & secretes excess Na & Cl in sharks.





## QUIZZES

### Practice Test No. 3



5 Questions



5 min

#### Topics

Excretion, Excretion in Plants, Excretion in Animals, Nature of Excretory Products in Relation to Habitats

**Start Quiz**



1/5



5 min



Hint

Q : Removal of metabolic nitrogenous wastes is called:

A

Defecation

B

Excretion

C

Egestion

D

All of these



2/5



5 min



Hint

Q : Which part of the plant body serves as excretophore?



Root



Stem



Leaves



Flowers



3/5



5 min



Hint

Q : Hypoxanthine, xanthine, ammonia, urea, uric acid and allantoin are produced by metabolism of:



Purine



Pyrimidine



Protein



Nitrogenous bases



4/5



5 min



Hint

Q : Nitrogenous waste is very toxic and dissolves quickly in body fluids is:

 $\text{CO}_2$ 

Urea



Ammonia



Uric acid



5/5



5 min



Hint

Q : Amount of water required to remove 1g of uric acid is \_\_\_\_\_ times less than that of urea:



10



50



1



500



Correct



Unattempted



Incorrect



1/5

Q : Removal of metabolic nitrogenous wastes is called:



Defecation



Excretion



Egestion



All of these

## Explanation

In animals, mainly the release of nitrogenous waste is called excretion i.e. urea, uric acid and ammonia. Egestion/ defecation is the removal of undigested waste.





Correct



Unattempted



Incorrect



2/5

Q : Which part of the plant body serves as excretophore?



Root



Stem



Leaves



Flowers

## Explanation

Plants get rid of organic and inorganic wastes by various methods. One of the method is to store extra compounds in leaves which are called excretophores. These leaves fall seasonally along with extra compounds.





Correct



Unattempted



Incorrect



3/5

Q : Hypoxanthine, xanthine, ammonia, urea, uric acid and allantoin are produced by metabolism of:



Purine



Pyrimidine



Protein



Nitrogenous bases

## Explanation

Metabolism of purines and pyrimidines produce following compounds:

Ammonia, urea, uric acid, hypoxanthine, xanthine and allantoin.



Correct



Unattempted



Incorrect



4/5

Q : Nitrogenous waste is very toxic and dissolves quickly in body fluids is:

 $\text{CO}_2$ 

Urea



Ammonia



Uric acid

## Explanation

Ammonia is highly toxic compound that dissolve quickly in water. For the removal of 1g of  $\text{NH}_3$ , 500ml of water is required.



Correct



Unattempted



Incorrect



5/5

Q : Amount of water required to remove 1g of uric acid is \_\_\_\_\_ times less than that of urea:

A

10

B

50

C

1

D

500

## Explanation

Order of toxicity and water requirements are as follows:

Ammonia > urea > uric acid

- 1g of ammonia required 500ml of water

1g of urea required 50ml of water

1

2

3

4

5





## QUIZZES

### Practice Test No. 4



5 Questions



5 min

#### Topics

Excretion in Hydra, Excretion in Planaria,  
Excretion in Earthworm, Excretion in  
Cockroach, Excretion in Vertebrates

[Start Quiz](#)



1/5



5 min



Hint

Q : Wall of the following contain specialised excretory system except:

*Hydra**Planaria*

Earthworm



Cockroach



2/5



5 min



Hint

Q : A network of tubules without internal openings is called:

A

Protonephridium

B

Metanephridium

C

Nephron

D

Kidney



3/5



5 min



Hint

Q : Nephridia are the excretory structures present in:



Hydra



Planaria



Cockroach



Earthworm



4/5



5 min



Hint

Q : The group of animals whose excretory system is structurally associated with nutritive tract:

A

Vertebrates

B

Earthworm

C

Planaria

D

Insects





5/5



5 min



Hint

Q : The organism which are primitive vertebrates and contain kidneys with segmentally arranged tubules are:

A

Insects

B

Hagfishes

C

Flatworms

D

Roundworms



Correct



Unattempted



Incorrect



1/5

Q : Wall of the following contain specialised excretory system except:

*Hydra**Planaria*

Earthworm



Cockroach

## Explanation

*Hydra* belongs to the phylum cnidaria which are diploblastic and they do not contain specialized excretory system. In these, metabolic waste directly diffuse into the water.





Correct



Unattempted



Incorrect



2/5

Q : A network of tubules without internal openings is called:



Protonephridium



Metanephridium



Nephron



Kidney

## Explanation

The tubular system of planaria is called protonephridia. These blind ended tubules (without internal openings while having external openings) are called nephridiophores.



Correct



Unattempted



Incorrect



3/5

Q : Nephridia are the excretory structures present in:



Hydra



Planaria



Cockroach



Earthworm

## Explanation

Segmented worms contain a pair of excretory tubules in each segment called meta-nephridia. Each tubule has internal opening called nephrostome and external opening called nephridiophore.





Correct



Unattempted



Incorrect



4/5

Q : The group of animals whose excretory system is structurally associated with nutritive tract:



Vertebrates



Earthworm



Planaria



Insects

## Explanation

The digestive system of cockroach is tube like with two openings. It is associated with excretory tubules called malpighian tubules which excrete nitrogenous waste through digestive tract.



Correct



Unattempted



Incorrect



5/5

Q : The organism which are primitive vertebrates and contain kidneys with segmentally arranged tubules are:

A

Insects

B

Hagfishes

C

Flatworms

D

Roundworms

## Explanation

Hagfishes are the primitive vertebrates which shows an evolutionary link due to the presence of kidneys with segmentally arranged tubules.





## QUIZZES

### Practice Test No. 5



5 Questions



5 min

#### Topics

Liver, Urinary System, Role of Hormones,  
Kidney Stones & Lithotripsy, Renal Failure,  
Dialysis & Transplantation

[Start Quiz](#)





1/5



5 min



Hint

Q : The removal of sebum on the skin is for:

A

Nutrition

B

Excretion

C

Protection

D

Thermoregulation





2/5



5 min



Hint

Q : The excretory structures that deliver urine from kidney to urinary bladder:

A

Urethra

B

Pelvis

C

Ureter

D

Collecting tubule



3/5



5 min



Hint

Q : High levels of ADH produce:

A

Dilute urine

B

Concentrated urine

C

Excessive urine

D

All of the above



4/5



5 min



Hint

Q : 70% of the kidney stones are due to the deposition of:

A

Calcium oxalate

B

Calcium phosphate

C

Uric acid

D

None of these



5/5



5 min



Hint

Q : The other name of arterial blood dialysis:

A

Peritoneal dialysis

B

Haemodialysis

C

Oncodialysis

D

Stereodialysis



Correct



Unattempted



Incorrect



1/5

Q : The removal of sebum on the skin is for:



Nutrition



Excretion



Protection



Thermoregulation

## Explanation

The oily secretion from sebaceous glands contain lactic acid that lower the pH and inhibit the growth of bacteria.



Correct



Unattempted



Incorrect



2/5

Q : The excretory structures that deliver urine from kidney to urinary bladder:

A

Urethra

B

Pelvis

C

Ureter

D

Collecting tubule

## Explanation

Urine is delivered through the following pathway:

Kidneys → Ureters → Urinary bladder → Urethra



Correct



Unattempted



Incorrect



3/5

Q : High levels of ADH produce:

A

Dilute urine

B

Concentrated urine

C

Excessive urine

D

All of the above

## Explanation

Anti-diuretic hormone (ADH) is released from posterior pituitary and its target sites are present on collecting duct. It increases active uptake of water.



Correct



Unattempted



Incorrect



4/5

Q : 70% of the kidney stones are due to the deposition of:



Calcium oxalate



Calcium phosphate



Uric acid



None of these

## Explanation

Kidney stone formation is a metabolic disease in which various salts precipitate out and form stones including:

- Calcium oxalate (70%)
- Calcium phosphate (15%)
- Uric acid (10%)







Correct



Unattempted



Incorrect



5/5

Q : The other name of arterial blood dialysis:

A

Peritoneal dialysis

B

Haemodialysis

C

Oncodialysis

D

Stereodialysis

## Explanation

In hemodialysis, the blood moves from the artery and to the dialysis machine. After filtration, blood will return back to the body through vein.





## QUIZZES

### Practice Test No. 6



3 Questions



5 min

#### Topics

Thermoregulation in Plants

[Start Quiz](#)



1/3



5 min



Hint

Q : Super cool cytosol, without ice formation, is caused by:

A

Heat shock proteins

B

Unsaturated fatty acids

C

Solutes

D

Enzymes



2/3



5 min



Hint

Q : Heat shock proteins embrace:

A

Enzymes

B

Hormones

C

Proteins

D

All of these



3/3



5 min



Hint

Q : Plants respond to rapid chilling by:

A

Producing heat shock proteins

B

Changing concentration of cytosol

C

By preventing ice crystal formation

D

Plant cannot tolerate rapid chilling



Correct



Unattempted



Incorrect



1/3

Q : Super cool cytosol, without ice formation, is caused by:

A

Heat shock proteins

B

Unsaturated fatty acids

C

Solutes

D

Enzymes

## Explanation

The plants which survive under the stress of cold have developed various mechanisms to prevent ice crystal formation in cytosol. One of these is to increase solute concentration in cytosol which decrease the melting point and hence it prevents ice crystal formation.



Correct



Unattempted



Incorrect



2/3

Q : Heat shock proteins embrace:



Enzymes



Hormones



Proteins



All of these

## Explanation

The plants which survive under extreme stress of high temperature produce heat shock proteins. These will embrace various proteins to prevent denaturation.





Correct



Unattempted



Incorrect



3/3

Q : Plants respond to rapid chilling by:

A

Producing heat shock proteins

B

Changing concentration of cytosol

C

By preventing ice crystal formation

D

Plant cannot tolerate rapid chilling

## Explanation

Under cold stress, plants start increasing solute concentration in cytosol which prevent ice crystal formation. But under rapid chilling, solute will not accumulate quickly. This will lead to ice crystal formation in cytosol.





## QUIZZES

### Practice Test No. 7



5 Questions



5 min

#### Topics

Temperature Classification of Animals

[Start Quiz](#)



1/5



5 min



Hint

Q : Name the adaptations from the following that is responsible for shivering thermogenesis:



Structural



Physiological



Behavioural



None of these



2/5



5 min



Hint

Q : Which one of the following is heterotherm?



Bat



Frog



Snake



Man



3/5



5 min



Hint

Q : Flying insects are:



Endotherm



Ectotherm



Heterotherm



Poikilotherm



4/5



5 min



Hint

Q : Animals which are capable of varying degree of body heat production but do not regulate their body temperature:



Endotherm



Ectotherm



Heterotherm



Poikilotherm



5/5



5 min



Hint

Q : The animals that keep their body temperature in a wide range are called:



Homeotherms



Heterotherms



Isotherms



Poikilotherms



Correct



Unattempted



Incorrect



1/5

Q : Name the adaptations from the following that is responsible for shivering thermogenesis:



Structural



Physiological



Behavioural



None of these

## Explanation

As the body temperature fall below the normal range, hypothalamus will activate mechanical contractions of skeletal muscles. These contractions increase heat production in the body which is called shivering thermogenesis.



Correct



Unattempted



Incorrect



2/5

Q : Which one of the following is heterotherm?



Bat



Frog



Snake



Man

## Explanation

Heterotherms is a group of organisms in which the rate of metabolism is variable and therefore they cannot maintain their constant body temperature.





Correct



Unattempted



Incorrect



3/5

Q : Flying insects are:



Endotherm



Ectotherm



Heterotherm



Poikilotherm

## Explanation

The organisms which maintain their body temperature at constant level by using internal heat are called endotherms.





Correct



Unattempted



Incorrect



4/5

Q : Animals which are capable of varying degree of body heat production but do not regulate their body temperature:



Endotherm



Ectotherm



Heterotherm



Poikilotherm

## Explanation

Heterotherms is a group of organisms in which the rate of metabolism is variable and therefore they can not maintain their constant body temperature.



Correct



Unattempted



Incorrect



5/5

Q : The animals that keep their body temperature in a wide range are called:



Homeotherms



Heterotherms



Isotherms



Poikilotherms

## Explanation

Heterotherms is a group of organisms in which the rate of metabolism is variable and therefore they cannot maintain their constant body temperature.





## QUIZZES

### Practice Test No. 8



5 Questions



5 min

#### Topics

Regulation of Heat Exchange between  
Animals & Environment

[Start Quiz](#)



1/5



5 min



Hint

Q : The body temperature regulation in human is based on complex homeostatic thermostat present in the:



Cerebrum



Medulla oblongata



Hypothalamus



Thalamus



2/5



5 min



Hint

Q : The animals that generate their own body heat through heat production as by product during metabolism are called:

A

Endotherm

B

Ectotherm

C

Heterotherm

D

Mesotherm



3/5



5 min



Hint

Q : Which of the following is an endotherm?

A

Humming Bird

B

Reptiles

C

Birds

D

Bat



4/5



5 min



Hint

Q : The mechanism of evaporative cooling in respiratory tract of dog is known as:



Panting



Shivering thermogenesis



Thermoregulation



Vasodilation





5/5



5 min



Hint

Q : Which of the following structure is not involved in the control of heat in cold temperature?



Raising of fur



Production of sub-epidermal fat



Vasoconstriction



Sweat gland



Correct



Unattempted



Incorrect



1/5

Q : The body temperature regulation in human is based on complex homeostatic thermostat present in the:

A

Cerebrum

B

Medulla oblongata

C

Hypothalamus

D

Thalamus

## Explanation

Hypothalamus is the control center of most of the cyclic processes i.e. menstrual cycle, water balance cycle, body temperature regulation and hunger cycle.



Correct



Unattempted



Incorrect



2/5

Q : The animals that generate their own body heat through heat production as by product during metabolism are called:



Endotherm



Ectotherm



Heterotherm



Mesotherm

## Explanation

The organisms which maintain their body temperature at constant level by using internal heat are called endotherms. Examples are birds and mammals



Correct



Unattempted



Incorrect



3/5

Q : Which of the following is an endotherm?

A

Humming Bird

B

Reptiles

C

Birds

D

Bat

## Explanation

The organisms which maintain their body temperature at constant level by using internal heat are called endotherms. In such organisms, the heat liberation is high during metabolism. Examples are birds and mammals.



Correct



Unattempted



Incorrect



4/5

Q : The mechanism of evaporative cooling in respiratory tract of dog is known as:



Panting



Shivering thermogenesis



Thermoregulation



Vasodilation

## Explanation

Panting is a physiological adaptation in which organisms regulate their body temperature via evaporation from their respiratory tract.



Correct



Unattempted



Incorrect



5/5

Q : Which of the following structure is not involved in the control of heat in cold temperature?

A

Raising of fur

B

Production of sub-epidermal fat

C

Vasoconstriction

D

Sweat gland

## Explanation

Sweat glands are the specialized glands present in skin. These glands, upon activation, release sweat. Evaporation of sweat from skin lowers the body temperature.



1/5



5 min



Hint

Q : The evaporative cooling in the respiratory tract is the mechanism called:



Vasodilation



Vasoconstriction



Insulation



Panting





2/5



5 min



Hint

Q : Saliva and urine are used for evaporative cooling by:



Bats



Dogs



Birds



Seals





3/5



5 min



Hint

Q : The homeostatic thermostat is present in:



Pituitary



Hypothalamus



Pancreas



Kidney



4/5



5 min



Hint

Q : Shivering thermogenesis involve:

A

Thalamus

B

Thyroid

C

Muscles

D

Pancreas



5/5



5 min



Hint

Q : In non-shivering thermogenesis:

A

Thyroxin hormone is involved

B

Metabolic rate is increased

C

Glucose breakdown is increased

D

All of the above



## QUIZ RESULT

### Practice Test No. 9



5



5 min



29-Jan-2021



0 sec



0/5



0.0%

Result Detail



Correct



Unattempted



Incorrect



1/5

Q : The evaporative cooling in the respiratory tract is the mechanism called:



Vasodilation



Vasoconstriction



Insulation



Panting

## Explanation

Panting is a physiological adaptation in which organisms regulate their body temperature via evaporation from their respiratory tract.



Correct



Unattempted



Incorrect



2/5

Q : Saliva and urine are used for evaporative cooling by:



Bats



Dogs



Birds



Seals

## Explanation

Bats are Heterotherms. They spray their urine and saliva on their body for evaporative cooling.



Correct



Unattempted



Incorrect



3/5

Q : The homeostatic thermostat is present in:



Pituitary



Hypothalamus



Pancreas



Kidney

## Explanation

Hypothalamus is the part of brain that is the major coordinating center of the body. i.e temperature , water balance, menstrual cycle and sleep wake cycle.





Correct



Unattempted



Incorrect



4/5

Q : Shivering thermogenesis involve:



Thalamus



Thyroid



Muscles



Pancreas

## Explanation

Shivering thermogenesis is the mechanical process of heat production in which heat is produced by skeletal muscle contraction under hypothermia.





Correct



Unattempted



Incorrect



5/5

Q : In non-shivering thermogenesis:

A

Thyroxin hormone is involved

B

Metabolic rate is increased

C

Glucose breakdown is increased

D

All of the above

## Explanation

In non-shivering thermogenesis, hypothalamus activate pituitary gland which ultimately regulate thyroid gland to release thyroxin. This hormone increase basal metabolic rate which effects the heat production in body.



## QUIZZES

### Practice Test No. 10



4 Questions



5 min

#### Topics

Temperature in Fever (Pyrexia)

[Start Quiz](#)



1/4



5 min



Hint

Q : During infection pyrogens are produced in the human body by:

A

RBCs

B

WBCs

C

Platelets

D

Blood plasma



2/4



5 min



Hint

Q : In bacterial and viral infections there occurs an increase in the number of :



Antigens



Erythrocytes



Leucocytes



Platelets



3/4



5 min



Hint

Q : Pyrogens displace set point of \_\_\_\_\_ above normal point of 37°C.

A

Hypothalamus

B

Cerebellum

C

Thalamus

D

Pons



4/4



5 min



Hint

Q : Pyrogens are produced by:

A

Bacteria

B

Red blood cell

C

Viruses

D

All of the above



Correct



Unattempted



Incorrect



1/4

Q : During infection pyrogens are produced in the human body by:

A

RBCs

B

WBCs

C

Platelets

D

Blood plasma

## Explanation

Upon entry of pathogen in body it release chemicals which are called pyrogens. It also regulate leukocytes to release pyrogens. These chemicals raise the set point of temperature in hypothalamus.



Correct



Unattempted



Incorrect



2/4

Q : In bacterial and viral infections there occurs an increase in the number of :



Antigens



Erythrocytes



Leucocytes



Platelets

## Explanation

The pathogen, after invading body, regulate the body immune system. In this regulation, number of leukocytes increase to combat invading germs.





Correct



Unattempted



Incorrect



3/4

Q : Pyrogens displace set point of \_\_\_\_\_ above normal point of  $37^{\circ}\text{C}$ .



Hypothalamus



Cerebellum



Thalamus



Pons

## Explanation

Upon entry of pathogen in body it release chemicals which are called pyrogens. It also regulate leukocytes to release pyrogens. These chemicals raise the set point of temperature in hypothalamus.



Correct



Unattempted



Incorrect



4/4

Q : Pyrogens are produced by:



Bacteria



Red blood cell



Viruses



All of the above

## Explanation

Upon entry of pathogen in body it release chemicals which are called pyrogens. It also regulate leukocytes to release pyrogens. These chemicals raise the set point of temperature in hypothalamus.



## QUIZZES

### Practice Test No. 11



5 Questions



5 min

#### Topics

Support in Plants, Significance of Secondary Growth

[Start Quiz](#)



1/5



5 min



Hint

Q : The cells which are the main source of protection in seed coats and nut shells are:

A

Vessels

B

Sclereides

C

Tracheid

D

Trachea



2/5



5 min



Hint

Q : Fibers, sclereides and vessels are types of:

A

Collenchyma cells

B

Sclerenchyma cells

C

Parenchyma cells

D

Cambial cells



3/5



5 min



Hint

Q : Tubular structures joined end to end to form conducting pipes:

A

Tracheids

B

Fibers

C

Sclereides

D

Vessels



4/5



5 min



Hint

Q : An increase in plant girth due to the activity of vascular cambium is called:



Development



Primary growth



Secondary growth



Open growth



5/5



5 min



Hint

Q : The soft parenchymatous tissue formed over the wound in plants is called:



Gall



Tumors



Callus



Growth galls





Correct



Unattempted



Incorrect



1/5

Q : The cells which are the main source of protection in seed coats and nut shells are:

A

Vessels

B

Sclereides

C

Tracheid

D

Trachea

## Explanation

Sclereides are a reduced form of sclerenchyma cells with highly thickened, lignified cellular walls that form small bundles of durable layers of tissue in most plants



Correct



Unattempted



Incorrect



2/5

Q : Fibers, sclereides and vessels are types of:

A

Collenchyma cells

B

Sclerenchyma cells

C

Parenchyma cells

D

Cambial cells

## Explanation

Sclerenchyma cells provide support to plants in form of Fibers (Tracheids), Sclereides and Vessels (Tracheae).



Correct



Unattempted



Incorrect



3/5

Q : Tubular structures joined end to end to form conducting pipes:



Tracheids



Fibers



Sclereides



Vessels

## Explanation

A vessel element or vessel member is one of the cell types found in xylem, the water conducting tissue of plants.



Correct



Unattempted



Incorrect



4/5

Q : An increase in plant girth due to the activity of vascular cambium is called:



Development



Primary growth



Secondary growth



Open growth

## Explanation

Secondary growth is the growth that results from cell division in the cambia or lateral meristems and that causes the stems and roots to thicken.





Correct



Unattempted



Incorrect



5/5

Q : The soft parenchymatous tissue formed over the wound in plants is called:



Gall



Tumors



Callus



Growth galls

## Explanation

Cambium forms callus which unites the branches during budding and grafting.



## QUIZZES

### Practice Test No. 12



5 Questions



5 min

Topics

Movements in Plants

[Start Quiz](#)



1/5



5 min



Hint

Q : Movement shown by sperm of liverworts, mosses, ferns towards archegonia is a:



Chemotactic movement



Photo-tactic movement



Chemotropic movement



Phototropic movement



2/5



5 min



Hint

Q : The hyphae of fungi show:

A

Thigmo-tropism

B

Chemotropism

C

Hydrotropism

D

Geotropism





3/5



5 min



Hint

Q : The principal stimulus for photonasty is:



Light



Temperature



Photoperiod



Touch



4/5



5 min



Hint

Q : Flowers of tulip close at night due to:

A

Photonasty

B

Phototactic

C

Sleep movements

D

Thermonasty



5/5



5 min



Hint

Q : Closure of Venus fly trap on sitting of insect is an example of:

A

Thigmotropism

B

Hyponasty

C

Haptonasty

D

Epinasty



Correct



Unattempted



Incorrect



1/5

Q : Movement shown by sperm of liverworts, mosses, ferns towards archegonia is a:



Chemotactic movement



Photo-tactic movement



Chemotropic movement



Phototropic movement

## Explanation

The movement of sperm of lower plants towards archegonia is in response to nucleic acid. So, the movement in response to chemical stimulus is called chemotactic movements.



Correct



Unattempted



Incorrect



2/5

Q : The hyphae of fungi show:



Thigmo-tropism



Chemotropism



Hydrotropism



Geotropism

## Explanation

The movement in response to some chemicals is called chemotropism.





Correct



Unattempted



Incorrect



3/5

Q : The principal stimulus for photonasty is:



Light



Temperature



Photoperiod



Touch

## Explanation

Photonasty movements are non-directional movements and the main stimulus is photoperiod. The flower open and close due to light intensity.



Correct



Unattempted



Incorrect



4/5

Q : Flowers of tulip close at night due to:



Photonasty



Phototactic



Sleep movements



Thermonasty

## Explanation

The flowers of tulip close at night because of rapid growth in the lower side by upward and inward bending of the petals.





Correct



Unattempted



Incorrect



5/5

Q : Closure of Venus fly trap on sitting of insect is an example of:



Thigmotropism



Hyponasty



Haptonasty



Epinasty

## Explanation

Nastic movements in response to contact is called haptonastic movement.





## QUIZZES

### Practice Test No. 13



5 Questions



5 min

#### Topics

Role of Plant Growth Substances in Plant  
Movement

[Start Quiz](#)



1/5



5 min



Hint

Q : Positive gravitropism of root is due to:



Auxin



Gibberellin



Absciscic acid



Ethene



2/5



5 min



Hint

Q : Auxins play a role in:

A

Phototropism

B

Gravitropism

C

Epinasty

D

All of the above



3/5



5 min



Hint

Q : Such type of movement in which gibberellins are involved is:

A

Nutation

B

Nyctinasty

C

Epinasty

D

Hyponasty



4/5



5 min



Hint

Q : Such type of movement in which gibberellins are involved is:

A

Nutation

B

Nyctinasty

C

Epinasty

D

Hyponasty



5/5



5 min



Hint

Q : Epinasty occurs due to:

A

Gibberellins

B

Auxins

C

Cytokinins

D

Abscisins



Correct



Unattempted



Incorrect



1/5

Q : Positive gravitropism of root is due to:



Auxin



Gibberellin



Abscissic acid



Ethene

## Explanation

Auxin are responsible for positive gravitropism of roots and negative gravitropism of stems.





Incorrect



2/5

Q : Auxins play a role in:

A

Phototropism

B

Gravitropism

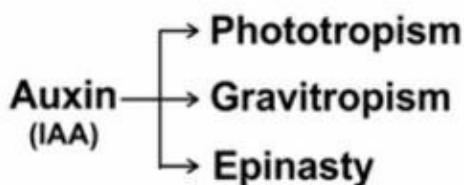
C

Epinasty

D

All of the above

## Explanation



Gibberelin —→ Hyponasty





Incorrect



3/5

Q : Such type of movement in which gibberellins are involved is:

A

Nutation

B

Nyctinasty

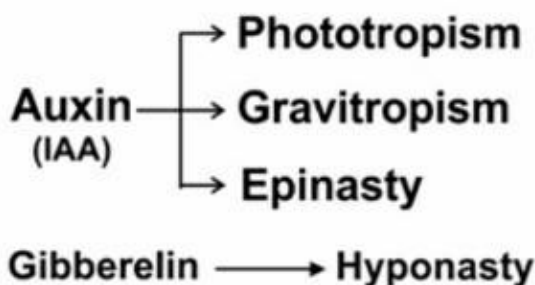
C

Epinasty

D

Hyponasty

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Such type of movement in which gibberellins are involved is:



Nutation



Nyctinasty



Epinasty



Hyponasty

## Explanation

Gibberellins and Auxins are growth hormones. Auxin responsible for epinasty while gibberellins responsible for hyponasty.



Incorrect



5/5

Q : Epinasty occurs due to:

A

Gibberellins

B

Auxins

C

Cytokinins

D

Absciscins

### Explanation

**Auxin (IAA)** —→ **Phototropism**  
                                  → **Gravitropism**  
                                  → **Epinasty**

**Gibberelin** —→ **Hyponasty**



## QUIZZES

### Practice Test No. 14



5 Questions



5 min

#### Topics

Hydrostatic Skeleton, Exoskeleton, Some  
Major Functions of Skeletal System,  
Endoskeleton

**Start Quiz**



1/5



5 min



Hint

Q : Outer most layer of exoskeleton is:

A

Endocuticle

B

Exocuticle

C

Procuticle

D

Epicuticle



2/5



5 min



Hint

Q : Both bone and cartilage are:

A

Rigid connective tissues

B

Consist of living cells

C

Contain collagen matrix

D

All of the above



3/5



5 min



Hint

Q : Most abundant type of cartilage in human body is:

A

Elastic cartilage

B

Fibrocartilage

C

Hyaline cartilage

D

Ligament



4/5



5 min



Hint

Q : All of the following contain only hydrostatic skeleton for support and movement except:



Cnidaria



Annelida



Mollusca



Platyhelminthes





5/5



5 min



Hint

Q : The function which is shared by all the types of skeletons is:

A

Mineral homeostasis

B

Blood cell production

C

Support and shape

D

Protection of vital organs



Incorrect



1/5

Q : Outer most layer of exoskeleton is:

A

Endocuticle

B

Exocuticle

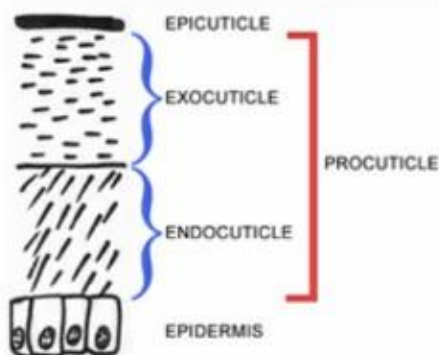
C

Procuticle

D

Epicuticle

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Both bone and cartilage are:



Rigid connective tissues



Consist of living cells



Contain collagen matrix



All of the above

## Explanation

Bones and cartilage are types of rigid connective tissue. Both consists of living cells embedded in the collagen matrix.





Correct



Unattempted



Incorrect



3/5

Q : Most abundant type of cartilage in human body is:



Elastic cartilage



Fibrocartilage



Hyaline cartilage



Ligament

## Explanation

Hyaline cartilage is the most abundant type in human body. It is found at the movable joints.



Correct



Unattempted



Incorrect



4/5

Q : All of the following contain only hydrostatic skeleton for support and movement except:



Cnidaria



Annelida



Mollusca



Platyhelminthes

## Explanation

Hydrostatic skeleton is a fluid filled coelomic or gastrovascular cavity which provide support and resistance to contraction of muscles. Mollusks also contain shell for protection along with hydrostatic skeleton.



Correct



Unattempted



Incorrect



5/5

Q : The function which is shared by all the types of skeletons is:



Mineral homeostasis



Blood cell production



Support and shape



Protection of vital organs

## Explanation

Providing support and maintaining shape are the primary functions which are shared by all the types of skeleton.



## QUIZZES

### Practice Test No. 15



5 Questions



5 min

#### Topics

Human Skeleton, Joints

[Start Quiz](#)





1/5



5 min



Hint

Q : Which of the following is a bone of axial skeleton?



Rib



Shoulder girdle



Pelvic



Femur





2/5



5 min



Hint

Q : Number of curvatures in vertebral column of humans is:



2



4



31



33



3/5



5 min



Hint

Q : The second cervical vertebra is known as:



Axis



Atlas



Coccyx



Sacrum



4/5



5 min



Hint

Q : Freely movable joints are:



Fibrous joints



Cartilaginous joints



Synovial joints



None of these



5/5



5 min



Hint

Q : Ligament is:

A

Slightly elastic

B

Holds the bones together

C

Formed by modification of a part of fibrous capsule

D

All of the above

Q : Which of the following is a bone of axial skeleton?

**A**

Rib

**B**

Shoulder girdle

**C**

Pelvic

**D**

Femur

## Explanation

Appendicular Skeleton



Axial Skeleton





Correct



Unattempted



Incorrect



2/5

Q : Number of curvatures in vertebral column of humans is:



2



4



31



33

## Explanation

The vertebral column has 4 curvatures which provide more strength than does the straight column.





Q : The second cervical vertebra is known as:

**A**

Axis

**B**

Atlas

**C**

Coccyx

**D**

Sacrum

## Explanation





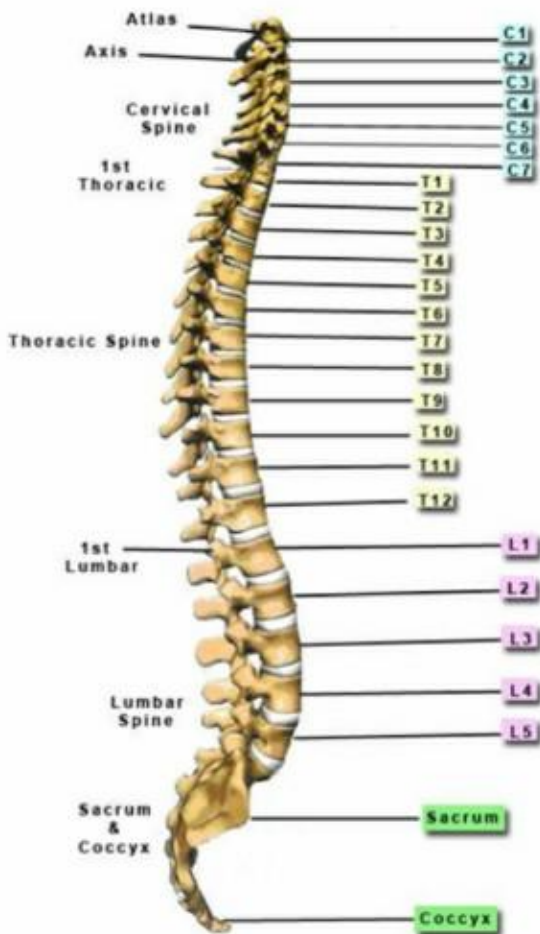
C

Coccyx

D

Sacrum

## Explanation







Correct



Unattempted



Incorrect



4/5

Q : Freely movable joints are:



Fibrous joints



Cartilaginous joints



Synovial joints



None of these

## Explanation

A synovial joint is the type of joint found between bones that move freely against each other.



Correct



Unattempted



Incorrect



5/5

Q : Ligament is:



Slightly elastic



Holds the bones together



Formed by modification of a part of fibrous capsule



All of the above

## Explanation

A short band of tough, flexible fibrous connective tissue which connects two bones or cartilages or holds together a joint is called ligament.



## QUIZZES

### Practice Test No. 16



5 Questions



5 min

#### Topics

Deformities of Skeleton

[Start Quiz](#)



1/5



5 min



Hint

Q : All of the following bones are associated with coxal bone, except:



Ilium



Ischium



Pubis



Clavicle



2/5



5 min



Hint

Q : Acute forms of arthritis usually result from:

A

Bacterial invasion

B

Viral invasion

C

Fungal invasion

D

Severe injury



3/5



5 min



Hint

Q : The inflammatory or degenerative disease that damages joints is called:



Arthritis



Osteoporosis



Meningitis



Spondylosis



4/5



5 min



Hint

Q : Which of the following is not a disorder of bone?

A

Disc slip

B

Spondylosis

C

Sciatica

D

Rickets



5/5



5 min



Hint

Q : Movement of vertebral column is not possible in:



Sciatica



Spondylosis



Gouty arthritis



Epilepsy





Correct



Unattempted



Incorrect



1/5

Q : All of the following bones are associated with coxal bone, except:



Ilium



Ischium



Pubis



Clavicle

## Explanation

Ilium, ischium and pubis are collectively called coxal bones while clavicle is called collar bone.



Correct



Unattempted



Incorrect



2/5

Q : Acute forms of arthritis usually result from:



Bacterial invasion



Viral invasion



Fungal invasion



Severe injury

## Explanation

Arthritis is inflammatory or degenerative disease that damages joints. It results in pain, stiffness, swelling of the joint. Acute forms of arthritis usually result from bacterial invasion and are treated with antibiotics.



Correct



Unattempted



Incorrect



3/5

Q : The inflammatory or degenerative disease that damages joints is called:



Arthritis



Osteoporosis



Meningitis



Spondylosis

## Explanation

Arthritis is inflammatory or degenerative disease that damages joints. It results in pain, stiffness, swelling of the joint. Acute forms of arthritis usually result from bacterial invasion and are treated with antibiotics.





Correct



Unattempted



Incorrect



4/5

Q : Which of the following is not a disorder of bone?



Disc slip



Spondylosis



Sciatica



Rickets

## Explanation

Sciatica is characterized by stabbing pain radiating over the course of sciatic nerve. It results due to injury of proximal sciatic nerve.





Correct



Unattempted



Incorrect



5/5

Q : Movement of vertebral column is not possible in:



Sciatica



Spondylosis



Gouty arthritis



Epilepsy

## Explanation

Spondylosis is the disease, which causes immobility and fusion of vertebral joint.





## QUIZZES

### Practice Test No. 17



5 Questions



5 min

#### Topics

Repair of Broken Bones

[Start Quiz](#)



1/5



5 min



Hint

Q : First stage of bone repair is:

A

Callus formation

B

Hematoma formation

C

Remodeling

D

Bony callus formation





2/5



5 min



Hint

Q : Which of the following is right sequence of cells involved in bone repair?

A

Osteoblast → Osteoclast → Osteocytes

B

Osteocyte → Osteoblast → Osteoclast

C

Osteoblast → Osteocyte → Osteoclast

D

Osteoclast → Osteoblast → Osteocytes





3/5



5 min



Hint

Q : Bone formation begins after injury:



1-2 weeks



2-3 weeks



3-4 weeks



4-5 weeks



4/5



5 min



Hint

Q : The stage in bone repair when blood vessels starts to develop is:

A

Callus formation

B

Hematoma formation

C

Remodeling

D

Bony callus formation



5/5



5 min



Hint

Q : Migration of fibroblast and osteoblast at fracture site begin bone formation during:

A

Callus formation

B

Hematoma formation

C

Bony callus formation

D

Remodeling



Correct



Unattempted



Incorrect



1/5

Q : First stage of bone repair is:



Callus formation



Hematoma formation



Remodeling



Bony callus formation

## Explanation

Hemorrhage results in a hematoma, a mass of clotted blood forms at the fracture site.



Correct



Unattempted



Incorrect



2/5

Q : Which of the following is right sequence of cells involved in bone repair?



Osteoblast → Osteoclast → Osteocytes



Osteocyte → Osteoblast → Osteoclast



Osteoblast → Osteocyte → Osteoclast



Osteoclast → Osteoblast → Osteocytes

## Explanation

Osteoclast invade first to eliminate the debris of callus, then osteoblasts move to form new bone cells (osteocytes).



Correct



Unattempted



Incorrect



3/5

Q : Bone formation begins after injury:



1-2 weeks



2-3 weeks



3-4 weeks



4-5 weeks

## Explanation

Bone formation begins 3-4 weeks after injury and continues until a firm bony union is formed within 2-3 months later.



Correct



Unattempted



Incorrect



4/5

Q : The stage in bone repair when blood vessels starts to develop is:



Callus formation



Hematoma formation



Remodeling



Bony callus formation

## Explanation

Callus begins to form in 3-4 weeks. Capillaries grow into the hematoma and clear up the debris. Fibroblasts and osteoblasts migrate into the fracture site and begin to construct bone.





Correct



Unattempted



Incorrect



5/5

Q : Migration of fibroblast and osteoblast at fracture site begin bone formation during:



Callus formation



Hematoma formation



Bony callus formation



Remodeling

## Explanation

Soft callus begin formation with in 3-4 weeks during which fibroblast and osteoblast migrate into the fracture site and begin to construct bone.





## QUIZZES

### Practice Test No. 18



5 Questions



5 min

#### Topics

Muscles & Types, Skeletal Muscle (Structure)

[Start Quiz](#)



1/5



5 min



Hint

Q : Muscles present in the gut wall are:



Smooth



Skeletal



Cardiac



Voluntry



2/5



5 min



Hint

Q : Cardiac muscles are the muscles of the:



Liver



Heart



Stomach



Kidney



3/5



5 min



Hint

Q : Skeletal muscles are called striated (stripped) because of presence of:

A

Red and yellow band

B

White and yellow band

C

Dark and light band

D

Red and black band



4/5



5 min



Hint

Q : Sarcoplasmic reticulum is like:



RER



SER



Golgi bodies



Cytoskeleton



5/5



5 min



Hint

Q : It stores calcium ions in muscle:

A

T-Tubules

B

Sarcoplasm

C

Sarcoplasmic reticulum

D

Myoglobin



Correct



Unattempted



Incorrect



1/5

Q : Muscles present in the gut wall are:



Smooth



Skeletal



Cardiac



Voluntry

## Explanation

Smooth muscles are involuntary, unstriped and spontaneous in action. Visceral organs and gut contain smooth muscles.





Correct



Unattempted



Incorrect



2/5

Q : Cardiac muscles are the muscles of the:



Liver



Heart



Stomach



Kidney

## Explanation

Cardiac muscles are striated, spontaneous and involuntary in action.





Correct



Unattempted



Incorrect



3/5

Q : Skeletal muscles are called striated (stripped) because of presence of:



Red and yellow band



White and yellow band



Dark and light band



Red and black band

## Explanation

Isotropic( I-band) and anisotropic (A-Band) are found alternatively in skeletal muscles that is why they are called striated.



Correct



Unattempted



Incorrect



4/5

Q : Sarcoplasmic reticulum is like:



RER



SER



Golgi bodies



Cytoskeleton

## Explanation

Sarcoplasmic reticulum is devoid of ribosomes and is a type of SER.



Correct



Unattempted



Incorrect



5/5

Q : It stores calcium ions in muscle:

A

T-Tubules

B

Sarcoplasm

C

Sarcoplasmic reticulum

D

Myoglobin

## Explanation

Sarcoplasmic reticulum is devoid of ribosomes and is storage house of calcium ions.



## QUIZZES

### Practice Test No. 19



5 Questions



5 min

#### Topics

Skeletal Muscle (Sliding Filament Model),  
Energy for Muscle Contraction, Effect of  
Exercise on Muscle

**Start Quiz**



1/5



5 min



Hint

Q : Which of the following changes occur when skeletal muscle contracts?

A

The A band shortens

B

The I band shortens

C

The Z line slide farther apart

D

The actin filament contract



2/5



5 min



Hint

Q : Calcium plays an important role in:



A Muscle contraction



B Blood circulation



C Joint movement



D Nerve sensation



3/5



5 min



Hint

Q : Muscle fatigue is caused by:

CO<sub>2</sub>

The accumulation of lactic acid



Fumaric acid



Ethyl alcohol



4/5



5 min



Hint

Q : The pH of a fatigued muscle is:



Neutral



Basic



Acidic



Variable





5/5



5 min



Hint

Q : All of the following are the direct or indirect source of ATP in muscles except:

A

Lactic acid

B

Glucose

C

Glycogen

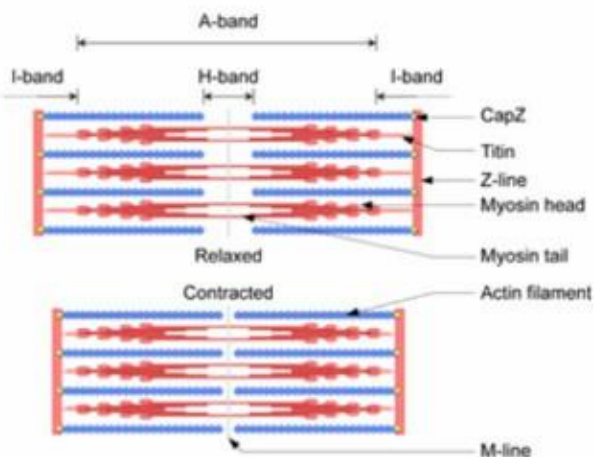
D

Creatine phosphate

Q : Which of the following changes occur when skeletal muscle contracts?

- A The A band shortens
- B The I band shortens**
- C The Z line slide farther apart
- D The actin filament contract

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Calcium plays an important role in:



Muscle contraction



Blood circulation



Joint movement



Nerve sensation

## Explanation

When the muscle is required to contract, calcium ions bind with the troponin molecule and cause them to move slightly. This has the effect of displacing the tropomyosin and exposing the binding sites for the myosin head.



Correct



Unattempted



Incorrect



3/5

Q : Muscle fatigue is caused by:

CO<sub>2</sub>

The accumulation of lactic acid



Fumaric acid



Ethyl alcohol

## Explanation

Muscle fatigue is the decline in ability of a muscle to contract. It can be a result of vigorous exercise.



Correct



Unattempted



Incorrect



4/5

Q : The pH of a fatigued muscle is:



Neutral



Basic



Acidic



Variable

## Explanation

Accumulation of lactic acid reduces the pH of cell which is acidic.



Correct



Unattempted



Incorrect



5/5

Q : All of the following are the direct or indirect source of ATP in muscles except:



Lactic acid



Glucose



Glycogen



Creatine phosphate

## Explanation

The product of anaerobic respiration is lactic acid which will be transported to the liver via blood where it is converted back into glucose.



## QUIZZES

### Practice Test No. 20



5 Questions



5 min

#### Topics

Arrangement of Skeletal Muscles for  
Movement of Skeleton

**Start Quiz**





1/5



5 min



Hint

Q : Brachioradialus causes the up lift of:



Radius



Ulna



Both A and B



Humerus





2/5



5 min



Hint

Q : Starting from immovable bone which is right sequence of parts of muscles:

A

Origin, insertion, belly

B

Origin, belly, insertion

C

Origin, movable bone, insertion

D

Belly, origin, insertion



3/5



5 min



Hint

Q : The attachment of muscles to movable bone:



Insertion



Origin



Tendon



Ligament



4/5



5 min



Hint

Q : All of the following are flexors except:

A

Biceps brachii

B

Triceps brachii

C

Brachialis

D

Brachioradialis



5/5



5 min



Hint

Q : Muscles that are attached to the skeleton and are associated with movement of bones:



Smooth



Skeletal



Cardiac



Circular smooth



Correct



Unattempted



Incorrect



1/5

Q : Brachioradialis causes the up lift of:



Radius



Ulna



Both A and B



Humerus

## Explanation

The brachialis is inserted in the ulna, while brachioradialis is inserted in the radius. When these muscles contract they lift radius and ulna and bend the arm at the elbow.



Incorrect



2/5

Q : Starting from immovable bone which is right sequence of parts of muscles:

A

Origin, insertion, belly

B

Origin, belly, insertion

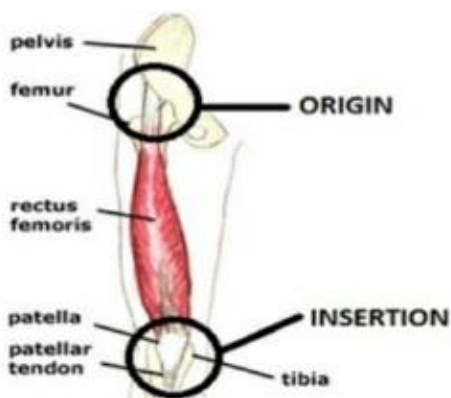
C

Origin, movable bone, insertion

D

Belly, origin, insertion

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : The attachment of muscles to movable bone:



Insertion



Origin



Tendon



Ligament

## Explanation

Origin is the end of muscle which remains fixed when muscle contracts, insertion is the end of the muscle that moves the bone, and belly is thick part between origin and insertion, which contracts.





Correct



Unattempted



Incorrect



4/5

Q : All of the following are flexors except:



Biceps brachii



Triceps brachii



Brachialis



Brachioradialis

## Explanation

Flexion	Extension
Biceps brachii	Triceps brachii
Brachialis	
Brachioradialis	





Correct



Unattempted



Incorrect



5/5

Q : Muscles that are attached to the skeleton and are associated with movement of bones:



Smooth



Skeletal



Cardiac



Circular smooth

## Explanation

Skeletal muscles are attached with bones and involved in their movement. Their action is voluntary.



## QUIZZES

### Practice Test No. 21



5 Questions



5 min

#### Topics

Locomotion in Euglena, Locomotion in Paramecium, Locomotion in Amoeba, Locomotion in Earthworm, Locomotion in Cockroach

[Start Quiz](#)



1/5



5 min



Hint

Q : Myonemes are special proteins present in:



Muscle



Amoeba



Euglena



Earth worm



2/5



5 min



Hint

Q : The diameter of cilia ranges from:

A

0.1 to 0.5 $\mu$ 

B

0.1 to 0.5mm

C

0.3 to 0.8 $\mu$ 

D

0.3 to 0.8mm



3/5



5 min



Hint

Q : The structure/s which help in locomotion in amoeba is/are:

A

Pseudopodia

B

Pseudopodia and cytoplasm

C

Pseudopodia and cilia

D

Cytoplasm and flagella



4/5



5 min



Hint

Q : During movement, setae from the anterior region comes out due to the contraction of \_\_\_\_\_ muscles while setae from the posterior region comes out due the contraction of \_\_\_\_\_ muscles.

A

Circular, Longitudinal

B

Circular, Circular

C

Longitudinal, Longitudinal

D

Longitudinal, Circular



5/5



5 min



Hint

Q : How many pairs of wings in cockroach are responsible for flight?



1



2



3



4



Correct



Unattempted



Incorrect



1/5

Q : Myonemes are special proteins present in:



Muscle



Amoeba



Euglena



Earth worm

## Explanation

A myoneme is a contractile structure found in some eukaryotic single-celled organisms, particularly euglena. It consists of a series of protein filaments that shorten rapidly upon exposure to calcium.





Correct



Unattempted



Incorrect



2/5

Q : The diameter of cilia ranges from:

0.1 to 0.5 $\mu$ 

0.1 to 0.5mm

0.3 to 0.8 $\mu$ 

0.3 to 0.8mm

## Explanation

Cilia are short, fine thread-like extensions of the cell membrane. The length of cilia ranges from many microns to many hundred microns and the diameter varies from 0.1 to 0.5 $\mu$ .



Correct



Unattempted



Incorrect



3/5

Q : The structure/s which help in locomotion in amoeba is/are:



Pseudopodia



Pseudopodia and cytoplasm



Pseudopodia and cilia



Cytoplasm and flagella

## Explanation

In amoeba movement takes place by pseudopodia. Pseudopodia are finger-like projections thrown in the direction of the flow of cytoplasm.



Correct



Unattempted



Incorrect



4/5

Q : During movement, setae from the anterior region comes out due to the contraction of \_\_\_\_\_ muscles while setae from the posterior region comes out due the contraction of \_\_\_\_\_ muscles.



Circular, Longitudinal



Circular, Circular



Longitudinal, Longitudinal



Longitudinal, Circular

## Explanation

During contraction of circular smooth muscles, the body of earthworm becomes elongated and anterior setae comes out and anchor on the surface. On the other hand, when longitudinal muscles contract then the body of earthworm becomes shorted and setae of posterior end comes out and anchor on the surface.





Correct



Unattempted



Incorrect



5/5

Q : How many pairs of wings in cockroach are responsible for flight?



1



2



3



4

### Explanation

Cockroach contain 2 pairs of wings but only the posterior pair of wings brings about the flight.





## QUIZZES

### Practice Test No. 22



5 Questions



5 min

#### Topics

Swimming in Fishes, Locomotion in  
Amphibian, Locomotion in Reptiles,  
Locomotion in Air, Locomotion in Mammals

[Start Quiz](#)



1/5



5 min



Hint

Q : Birds have strong \_\_\_\_ muscles.



Pelvic



Pectoral



Limb



Neck



2/5



5 min



Hint

Q : Which is not unguligrade?



Bear



Deer



Goat



Horse





3/5



5 min



Hint

Q : The buoyancy is presented by \_\_\_\_\_ fishes due the presence of specialized structure called \_\_\_\_\_.

A

Cartilaginous, Dermal denticles

B

Cartilaginous, Swim bladder

C

Bony, Dermal denticles

D

Bony, Swim bladder





4/5



5 min



Hint

Q : 'Swim on land' is the characteristic movement found in:



Birds



Fishes



Amphibians



Mammals



5/5



5 min



Hint

Q : Bipedal reptiles have narrow pelvis and long heavy tail to maintain the balance. As a result, the front appendages are freed which help in:

A

Capturing prey

B

Running

C

Flight

D

Climbing



Correct



Unattempted



Incorrect



1/5

Q : Birds have strong \_\_\_\_ muscles.

A

Pelvic

B

Pectoral

C

Limb

D

Neck

## Explanation

Birds have strong forelimb muscles for the purpose of flight.



Correct



Unattempted



Incorrect



2/5

Q : Which is not unguligrade?



Bear



Deer



Goat



Horse

## Explanation

Bear show plantigrade mode of locomotion. They walk on their soles with palm, wrist, and digits all resting more or less on ground, such as monkeys, apes, man etc.





Correct



Unattempted



Incorrect



3/5

Q : The buoyancy is presented by \_\_\_\_\_ fishes due the presence of specialized structure called \_\_\_\_\_.

A

Cartilaginous, Dermal denticles

B

Cartilaginous, Swim bladder

C

Bony, Dermal denticles

D

Bony, Swim bladder

## Explanation

Swim bladder is a balloon-like structure which help in maintaining the buoyancy in bony fishes.



Correct



Unattempted



Incorrect



4/5

Q : 'Swim on land' is the characteristic movement found in:



Birds



Fishes



Amphibians



Mammals

## Explanation

Amphibians wriggle along the belly on the ground with the help of segmentally arranged muscles as they 'swim on land' with legs hardly touching the ground.



Correct



Unattempted



Incorrect



5/5

Q : Bipedal reptiles have narrow pelvis and long heavy tail to maintain the balance. As a result, the front appendages are freed which help in:



Capturing prey



Running



Flight



Climbing

## Explanation

In bipedal reptiles the front appendages are used for capturing prey.



## QUIZZES

### Practice Test No. 23



5 Questions



5 min

#### Topics

Coordination in Plants, Control Through  
Hormones

[Start Quiz](#)





1/5



5 min



Hint

Q : Which of the following is not correct about plants?

A

They behave

B

They react

C

They grow

D

They are always with vascular tissue



2/5



5 min



Hint

Q : Which organism shows the slow speed of response?



Rose



Amoeba



Euglena



Sponge



3/5



5 min



Hint

Q : Coordination in plants is achieved through:

A

Nerve system

B

Endocrine system

C

Hormones

D

Neurotransmitters



4/5



5 min



Hint

Q : The behavior of plants depends upon:

A

Variation in growth rate and changes in photosynthesis

B

Changes in turgidity of cells and rate of transpiration

C

Variation in growth rate and changes in turgidity of cells

D

Variations in photosynthesis and transpiration rate



5/5



5 min



Hint

Q : Plants only contain \_\_\_\_\_ mode of coordination while animals also contain \_\_\_\_\_ coordination.

A

Nervous, Endocrine

B

Chemical, Nervous

C

Hormonal, Chemicals

D

Neuronal, Hormones



Correct



Unattempted



Incorrect



1/5

Q : Which of the following is not correct about plants?



They behave



They react



They grow



They are always with vascular tissue

## Explanation

All plants do not possess vascular tissues (e.g. bryophytes), but all plants behave, react and grow according to the environment and stimulus.



Correct



Unattempted



Incorrect



2/5

Q : Which organism shows the slow speed of response?



Rose



Amoeba



Euglena



Sponge

## Explanation

In comparison of plants and animals, plants show slow speed of response because plants have no nervous or endocrine system and but they respond to a stimulus by different types of hormones produce by them, while animals have nervous system and endocrine system.



Correct



Unattempted



Incorrect



3/5

Q : Coordination in plants is achieved through:



Nerve system



Endocrine system



Hormones



Neurotransmitters

## Explanation

Nervous system, endocrine system and neurotransmitters are characteristics of Kingdom Animalia.





Correct



Unattempted



Incorrect



4/5

Q : The behavior of plants depends upon:



A Variation in growth rate and changes in photosynthesis



B Changes in turgidity of cells and rate of transpiration



C Variation in growth rate and changes in turgidity of cells



D Variations in photosynthesis and transpiration rate

## Explanation

The behavior of plants primarily depends upon:

- Variations in growth rate
- Changes in turgidity of cells



Correct



Unattempted



Incorrect



5/5

Q : Plants only contain \_\_\_\_\_ mode of coordination while animals also contain \_\_\_\_\_ coordination.

A

Nervous, Endocrine

B

Chemical, Nervous

C

Hormonal, Chemicals

D

Neuronal, Hormones

## Explanation

In plants the coordination is solely due to hormones while animals also contain nervous system.



## QUIZZES

### Practice Test No. 24



5 Questions



5 min

#### Topics

Responses to Environmental Stresses in  
Plants, Defense Against Pathogens in Plants,  
Biological Clock and Circadian Rhythms

[Start Quiz](#)



1/5



5 min



Hint

Q : Highly organized growth galls are tumors induced by:



Fungi



Virus



Bacteria



Nematodes



2/5



5 min



Hint

Q : \_\_\_\_\_ are produced in response to pathogen attack.



Plant tumor



Buds



Callus



Etiolated leaves



3/5



5 min



Hint

Q : Environmental changes that are cyclic in nature are:



Days



Tides



Seasons



All of the above



4/5



5 min



Hint

Q : Biological rhythms show periodicity of 24 hours is called:



Circannual



Daily



Diurnal



Biorhythm



5/5



5 min



Hint

Q : Usually highly organized growth, developed as a result of infection and can invade in to nearby differentiated tissues is:



Galls



Callus



Cambium



Cortex





Correct



Unattempted



Incorrect



1/5

Q : Highly organized growth galls are tumors induced by:



Fungi



Virus



Bacteria



Nematodes

## Explanation

Plant galls are abnormal outgrowths of plant tissues. The less differentiated and highly organized galls are induced by bacteria.



Correct



Unattempted



Incorrect



2/5

Q : \_\_\_\_\_ are produced in response to pathogen attack.



Plant tumor



Buds



Callus



Etiolated leaves

## Explanation

Callus, buds and etiolated leaves are the non-pathogenic conditions but plant tumors are formed due to pathogenic attack e.g. galls growth.





Correct



Unattempted



Incorrect



3/5

Q : Environmental changes that are cyclic in nature are:



Days



Tides



Seasons



All of the above

## Explanation

Days, tides and seasons all are obeying a cyclic manner.





Correct



Unattempted



Incorrect



4/5

Q : Biological rhythms show periodicity of 24 hours is called:



Circannual



Daily



Diurnal



Biorhythm

## Explanation

Circadian or diurnal rhythm is a type of biorhythm that show periodicity of 24 hours.





Correct



Unattempted



Incorrect



5/5

Q : Usually highly organized growth, developed as a result of infection and can invade in to nearby differentiated tissues is:



Galls



Callus



Cambium



Cortex

## Explanation

Galls are the highly organized growths which are developed by parasites.



## QUIZZES

### Practice Test No. 25



5 Questions



5 min

#### Topics

Auxins, Gibberellins, Cytokinins, Absciscic Acid,  
Ethene

**Start Quiz**



1/5



5 min



Hint

Q : Which hormones promote root growth at low concentration and inhibits at high concentration?



Gibberellins



Auxins



Absciscic acid



Cytokinins



2/5



5 min



Hint

Q : Which one of the following sometimes substitutes for red light?



Auxins



Gibberellins



Cytokinins



Ethene





3/5



5 min



Hint

Q : To delay the aging of fresh leaf crops the functional hormone is:



ABA



Cytokinin



Ethane



IAA



4/5



5 min



Hint

Q : Hormone promoting flowering in short day plants:

A

Absciscic acid

B

Gibberellins

C

Auxins

D

Ethene



5/5



5 min



Hint

Q : Hormone used to convert raw mangoes to ripen one is:



IAA



GA



ABA



Ethene



Correct



Unattempted



Incorrect



1/5

Q : Which hormones promote root growth at low concentration and inhibits at high concentration?

A

Gibberellins

B

Auxins

C

Absciscic acid

D

Cytokinins

## Explanation

Auxin at high concentration promotes growth in the stem whereas inhibits growth in the main root system.



Correct



Unattempted



Incorrect



2/5

Q : Which one of the following sometimes substitutes for red light?



Auxins



Gibberellins



Cytokinins



Ethene

## Explanation

Gibberellins promote flowering only in long day plants that's why sometimes they act as substitute for red light. While auxins and cytokines does not promote flowering and ethene promotes flowering only in pineapple.



Correct



Unattempted



Incorrect



3/5

Q : To delay the aging of fresh leaf crops the functional hormone is:



ABA



Cytokinin



Ethane



IAA

## Explanation

Cytokinins prevent senescence in leaves by stimulating protein synthesis.



Correct



Unattempted



Incorrect



4/5

Q : Hormone promoting flowering in short day plants:



Absciscic acid



Gibberellins



Auxins



Ethene

## Explanation

ABA is antagonistic of gibberellins while auxins and ethene does not promote flowering.





Correct



Unattempted



Incorrect



5/5

Q : Hormone used to convert raw mangoes to ripen one is:



IAA



GA



ABA



Ethene

## Explanation

Ethene promotes ripening of fruit and initiates abscission of fruits and leaves.





## QUIZZES

### Practice Test No. 26



5 Questions



5 min

#### Topics

Nervous Coordination, Receptors, Working of  
Sensory Receptors With Special Reference to  
Skin

[Start Quiz](#)



1/5



5 min



Hint

Q : The direction of stimulus is from:



A Receptors → Effectors



B Receptors → Brain → Effector



C Receptor → Sensory neuron → Associative neuron → Motor neuron



D Receptors → Effectors → Brain



2/5



5 min



Hint

Q : The receptors may be:



Cell



Neuron endings



Receptor organs



All of the above



3/5



5 min



Hint

Q : Pain receptors are \_\_\_\_\_ time more than cold receptors in human skin.



10



27



270



100



4/5



5 min



Hint

Q : Which of followings are also called as electromagnetic receptors?

A

Chemoreceptors

B

Mechanoreceptors

C

Photoreceptors

D

Nociceptors



5/5



5 min



Hint

Q : Pressure, heat and cold receptors are:



Electromagnetic receptors



Naked nerve endings



Modified cellular corpuscles



Unspecialized nerve endings



Incorrect



1/5

Q : The direction of stimulus is from:

A

Receptors → Effectors

B

Receptors → Brain → Effector

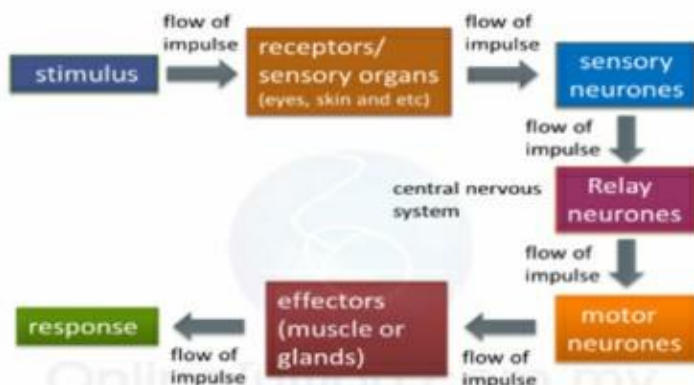
C

Receptor → Sensory neuron → Associative neuron → Motor neuron

D

Receptors → Effectors → Brain

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : The receptors may be:



Cell



Neuron endings



Receptor organs



All of the above

## Explanation

Those parts of the body that receive stimuli from internal or external environment are called receptors. They may be a cell or neuron ending or a receptor organ.





Correct



Unattempted



Incorrect



3/5

Q : Pain receptors are \_\_\_\_\_ time more than cold receptors in human skin.

A

10

B

27

C

270

D

100

## Explanation

The relative abundance of various types of receptors differs greatly e.g. pain receptors are nearly 27 times more abundant than cold receptors and cold receptors are nearly 10 times more abundant than hot receptors.



Correct



Unattempted



Incorrect



4/5

Q : Which of followings are also called as electromagnetic receptors?



Chemoreceptors



Mechanoreceptors



Photoreceptors



Nociceptors

## Explanation

Photoreceptors detect light.

Q : Pressure, heat and cold receptors are:

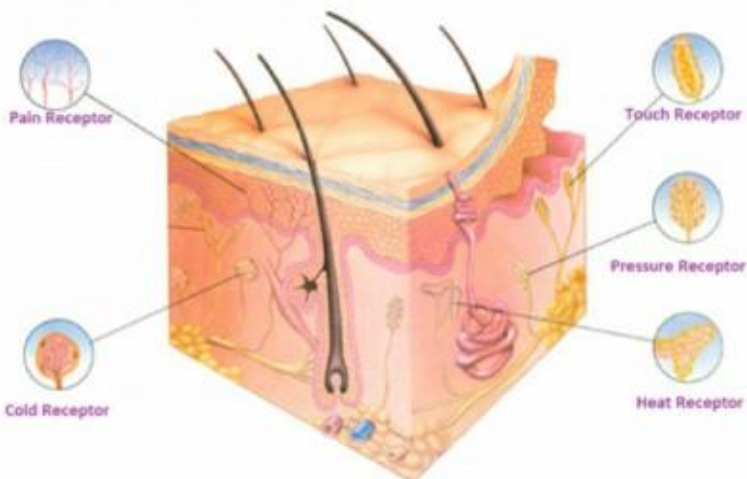
A Electromagnetic receptors

B Naked nerve endings

C Modified cellular corpuscles

D Unspecialized nerve endings

## Explanation





## QUIZZES

### Practice Test No. 27



5 Questions



5 min

#### Topics

Neurons, Effectors, Reflex Action & Reflex Arc

[Start Quiz](#)



1/5



5 min



Hint

Q : Microtubules, neurofibrils, RER and mitochondria are present throughout \_\_\_\_\_ of neuron.



Photoplasm



Axoplasm



Dendroplasm



Cell body



2/5



5 min



Hint

Q : Which is not the part of associative neuron?



Cell body



Axon



Dendrite



Dendron



3/5



5 min



Hint

Q : The cells which form myelin sheath are:



Neurons



Schwann cells



Mucous cells



Dendritic cells



4/5



5 min



Hint

Q : The structure which respond are called:

A

Effectors

B

Nerves

C

Receptors

D

Sense organs





5/5



5 min



Hint

Q : Which of the following is not primarily involved in reflex arc?



Sensory neurons



Motor neurons



Cluster of cell bodies in cerebral cortex



Cluster of cell bodies in spinal cord



Correct



Unattempted



Incorrect



1/5

Q : Microtubules, neurofibrils, RER and mitochondria are present throughout \_\_\_\_\_ of neuron.

A

Photoplasm

B

Axoplasm

C

Dendroplasm

D

Cell body

## Explanation

Axoplasm is the cytoplasm of axon containing microtubules, neurofibrils, RER and mitochondria.



Correct



Unattempted



Incorrect



2/5

Q : Which is not the part of associative neuron?



Cell body



Axon



Dendrite



Dendron

## Explanation

Dendron is a single fiber and part of sensory neuron.





Correct



Unattempted



Incorrect



3/5

Q : The cells which form myelin sheath are:



Neurons



Schwann cells



Mucous cells



Dendritic cells

## Explanation

Schwann cells are the cells that secrete a fatty substance, that acts as an insulator.



Incorrect



4/5

Q : The structure which respond are called:

A

Effectors

B

Nerves

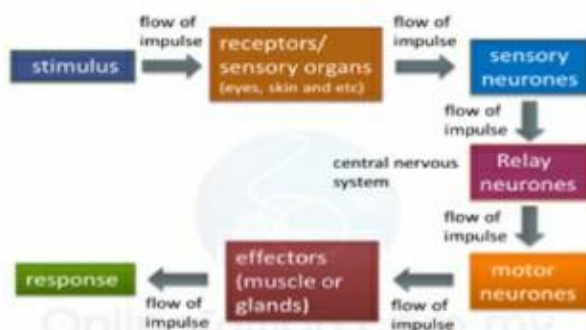
C

Receptors

D

Sense organs

## Explanation





Correct



Unattempted



Incorrect



5/5

Q : Which of the following is not primarily involved in reflex arc?



Sensory neurons



Motor neurons



Cluster of cell bodies in cerebral cortex



Cluster of cell bodies in spinal cord

## Explanation

Cerebral cortex contains primary sensory areas where signals originating in sensory organs such as eyes and ears are received and converted into subjective impressions such as light and sound.



## QUIZZES

### Practice Test No. 28



5 Questions



5 min

Topics

Nerve Impulse

[Start Quiz](#)



1/5



5 min



Hint

Q : When ATP is broken by ATPase,  $\text{Na}^+ \text{-} \text{K}^+$  \_\_\_\_\_.



Pump work



Gate work



Both work



Channels work





2/5



5 min



Hint

Q : Active membrane potential is:

A

-0.05 volts

B

+50 mv

C

-0.07 volt

D

+70 mv



3/5



5 min



Hint

Q : Cell membrane of neuron contains:

A

Na-K pump

B

Na &amp; K gates

C

Both of these

D

None of these



4/5



5 min



Hint

Q : Through Na gates, sodium ions move:

A

Into neuron through passive transport

B

Out of neuron through passive transport

C

Into neuron through active transport

D

Out of neuron through active transport



5/5



5 min



Hint

Q : Cell membrane of neuron contains:

A

 $\text{Na}^+ - \text{K}^+$  pump

B

 $\text{Ca}^{++} - \text{K}^+$  pump

C

 $\text{Na}^+ - \text{Ca}^{++}$  pump

D

 $\text{Na}^+ - \text{Cl}^-$  pump

Q : When ATP is broken by ATPase,  $\text{Na}^+$ - $\text{K}^+$  \_\_\_\_\_.

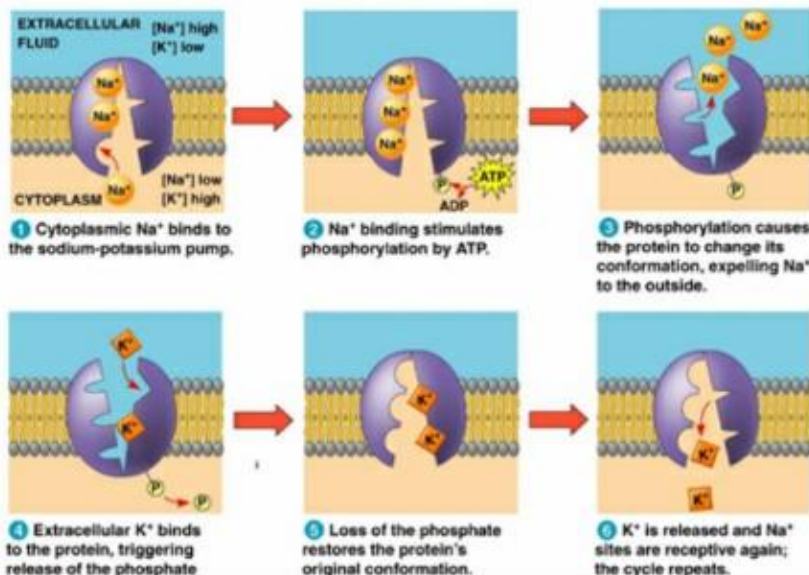
**A** Pump work

**B** Gate work

**C** Both work

**D** Channels work

## Explanation



Q : Active membrane potential is:

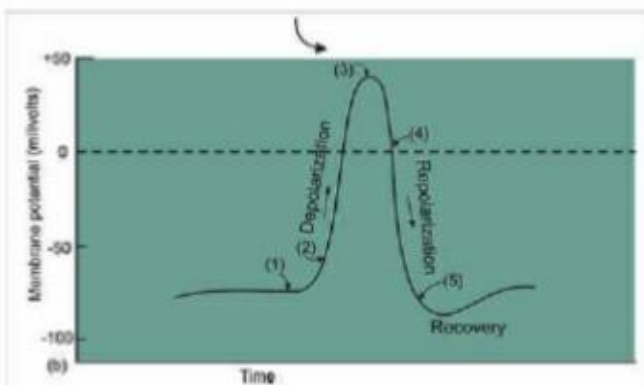
A -0.05 volts

B +50 mv

C -0.07 volt

D +70 mv

## Explanation



17.5 Active or action potential

(1) resting potential (polarized state); (2) sodium gates open and  $\text{Na}^+$  diffuses into the cell, causing a depolarization of the membrane; (3) sodium gates close and potassium gates open; (4)  $\text{K}^+$  diffuses out, causing a repolarization of the membrane; (5) sodium - potassium pump restores original ion gradients and resting potential (recovery). Steps (2) - (5) take a mere 2 - 3 milliseconds



Correct



Unattempted



Incorrect



3/5

Q : Cell membrane of neuron contains:



Na-K pump



Na &amp; K gates



Both of these



None of these

## Explanation

The most important ions in nerve cells are sodium and potassium. And their movement occurs through both Na-K pump and Na-K gates to maintain the membrane potential.







Correct



Unattempted



Incorrect



4/5

Q : Through Na gates, sodium ions move:



Into neuron through passive transport



Out of neuron through passive transport



Into neuron through active transport



Out of neuron through active transport

## Explanation

At threshold stimulus Na<sup>+</sup> gates open and sodium diffuses inside the neurolemma, which make inner side of neuron more positive.





Correct



Unattempted



Incorrect



5/5

Q : Cell membrane of neuron contains:

 $\text{Na}^+ - \text{K}^+$  pump $\text{Ca}^{++} - \text{K}^+$  pump $\text{Na}^+ - \text{Ca}^{++}$  pump $\text{Na}^+ - \text{Cl}^-$  pump

## Explanation

The most important ions in nerve cells are sodium and potassium and the Na-K pump actively transports 3  $\text{Na}^+$  out and 2  $\text{K}^+$  into the cell.



## QUIZZES

### Practice Test No. 29



5 Questions



5 min

Topics  
Synapse

Start Quiz



1/5



5 min



Hint

Q : Microscopic gap between the neurons is called as:

A

Synapsis

B

Synapse

C

Collapse

D

Preapse



2/5



5 min



Hint

Q : The main neurotransmitter for synapse that lie outside the central nervous system is:



Adrenalin



Serotonin



Dopamine



Acetylcholine



3/5



5 min



Hint

Q : In neurons the message is transmitted across synapse in the form of chemical messenger called:

A

Neurotransmitters

B

Communication

C

Nerve impulse

D

Synaptic vesicle



4/5



5 min



Hint

Q : All of these are neurotransmitter except:

A

B

C

D



4/5



5 min



Hint

Q : All of these are neurotransmitter except:



Adrenaline



Nor-adrenaline



Insulin



Serotonin



5/5



5 min



Hint

Q : Which of following is not a neurotransmitter?

A

Acetylcholine

B

Epinephrine

C

Serotonin

D

Vasopressin





## QUIZZES

### Practice Test No. 30



5 Questions



5 min

#### Topics

Central Nervous System, Brain, Spinal Cord,  
Peripheral Nervous System, Autonomic  
Nervous System

**Start Quiz**



1/5



5 min



Hint

Q : The structure of human brain that control sleep-wake cycle is:

A

Amygdala

B

Hippocampus

C

Thalamus

D

Hypothalamus



2/5



5 min



Hint

Q : In human the cranial nerves are:



10 pairs



11 pairs



12 pairs



31 pairs



3/5



5 min



Hint

Q : The system associated with relaxed state i.e. contraction of pupil etc. is:

A

Sympathetic nervous system

B

Parasympathetic nervous system

C

Autonomic nervous system

D

Peripheral nervous system



4/5



5 min



Hint

Q : In central nervous system, which of the following structure protects the neural arches?

A

Vertebral column

B

Spinal cord

C

Cranium

D

Cerebrospinal fluid



5/5



5 min



Hint

Q : Myelinated and non-myelinated tracts are present in \_\_\_\_\_ and \_\_\_\_\_ regions of spinal cord, respectively.

A

Central canal, Grey matter

B

White matter, Grey matter

C

White matter, Central canal

D

White matter, White matter



Correct



Unattempted



Incorrect



1/5

Q : The structure of human brain that control sleep-wake cycle is:



Amygdala



Hippocampus



Thalamus



Hypothalamus

## Explanation

Biorhythms are controlled by hypothalamus.



Correct



Unattempted



Incorrect



2/5

Q : In human the cranial nerves are:



10 pairs



11 pairs



12 pairs



31 pairs

## Explanation

In humans, 12 pairs of cranial nerves are present.







Correct



Unattempted



Incorrect



3/5

Q : The system associated with relaxed state i.e. contraction of pupil etc. is:



Sympathetic nervous system



Parasympathetic nervous system



Autonomic nervous system



Peripheral nervous system

## Explanation

Autonomic nervous system has two divisions. One is parasympathetic NS which controls the state of calmness while sympathetic NS control the state of emergency.





Correct



Unattempted



Incorrect



4/5

Q : In central nervous system, which of the following structure protects the neural arches?



Vertebral column



Spinal cord



Cranium



Cerebrospinal fluid

## Explanation

Cranium provide protection to the brain and neural arches while vertebral column protects the spinal cord. CSF is involved in the protection of both brain and spinal cord.





Correct



Unattempted



Incorrect



5/5

Q : Myelinated and non-myelinated tracts are present in \_\_\_\_\_ and \_\_\_\_\_ regions of spinal cord, respectively.

A

Central canal, Grey matter

B

White matter, Grey matter

C

White matter, Central canal

D

White matter, White matter

## Explanation

White matter is made of only myelinated nerve fibers or tracts while grey matter consists of cell bodies and non-myelinated nerve fibers or tracts.



## QUIZZES

### Practice Test No. 31



5 Questions



5 min

#### Topics

Parkinson's Disease, Epilepsy, Alzheimer's Disease, Effect of Drugs on Coordination

[Start Quiz](#)



1/5



5 min



Hint

Q : Rapid electric discharges are symptoms of:

A

Epilepsy

B

Parkinson's disease

C

Alzheimer's disease

D

All of these



2/5



5 min



Hint

Q : Nicotine affects:

A

Post synaptic membrane of PNS

B

Post synaptic membrane of CNS

C

Post synaptic membrane of PNS &amp; CNS

D

Pre synaptic membrane of PNS &amp; CNS



3/5



5 min



Hint

Q : A nervous disorder characterized by involuntary tremors, diminished motor power and rigidity is:

A

Parkinson's disease

B

Epilepsy disease

C

Alzheimer's disease

D

Herniation





4/5



5 min



Hint

Q : All of the following are the symptoms of Parkinson's except:

A

Normal mental faculties

B

Involuntary tremors

C

Diminished motor power

D

Rigidity





5/5



5 min



Hint

Q : The disease in which mental faculties are affected and is characterized by dementia like symptoms is:

A

Epilepsy

B

Parkinson's

C

Alzheimer's

D

Arthritis



Correct



Unattempted



Incorrect



1/5

Q : Rapid electric discharges are symptoms of:



Epilepsy



Parkinson's disease



Alzheimer's disease



All of these

## Explanation

Epilepsy is a convulsive disorder of nerves. The alterations that occur in brain function are associated with excessive rapid electric discharges in the gray matter.



Correct



Unattempted



Incorrect



2/5

Q : Nicotine affects:

A

Post synaptic membrane of PNS

B

Post synaptic membrane of CNS

C

Post synaptic membrane of PNS &amp; CNS

D

Pre synaptic membrane of PNS &amp; CNS

## Explanation

Nicotine affects post synaptic membrane of neurons. Its overuse increase blood pressure and rate of heart beat.



Incorrect



3/5

Q : A nervous disorder characterized by involuntary tremors, diminished motor power and rigidity is:

A

Parkinson's disease

B

Epilepsy disease

C

Alzheimer's disease

D

Herniation

## Explanation

**Epilepsy:** Characterized by abrupt transient symptoms of motor, sensory, psychotic or autonomic nature, frequently associated with changes in consciousness.

**Parkinson's disease:** Characterized by involuntary tremors, diminished motor power and rigidity.

**Alzheimer's disease:** Characterized by decline in brain functions.



Correct



Unattempted



Incorrect



4/5

Q : All of the following are the symptoms of Parkinson's except:



Normal mental faculties



Involuntary tremors



Diminished motor power



Rigidity

## Explanation

**Parkinson's disease:** It is characterized by involuntary tremors, diminished motor power and rigidity. Mental faculties remain normal so, this could not be categorized as symptom.



Correct



Unattempted



Incorrect



5/5

Q : The disease in which mental faculties are affected and is characterized by dementia like symptoms is:

A

Epilepsy

B

Parkinson's

C

Alzheimer's

D

Arthritis

## Explanation

Alzheimer's disease is characterized by decline in brain functions and its symptoms are similar to disease that cause dementia.

1

2

3

4

5





## QUIZZES

### Practice Test No. 32



5 Questions



5 min

#### Topics

Glands & Hormones, Hypothalamus, The Pituitary Gland, Thyroid Gland, Parathyroids

[Start Quiz](#)





1/5



5 min



Hint

Q : Which of the following is not correct about all hormones?

A

They are transferred by blood

B

They are protein in nature

C

They stimulate or inhibit the function

D

They affect different target cells





2/5



5 min



Hint

Q : Luteinizing hormone induces:

A

Flowering

B

Ovulation

C

Vernalization

D

Menopause



3/5



5 min



Hint

Q : Cause of Graves' disease is:

A

Exophthalmic- goiter

B

Decrease in BMR

C

Abnormal body protein

D

Cardiac failure



4/5



5 min



Hint

Q : High levels of  $\text{Ca}^{+2}$  ions suppress the release of:

A

Calcitonin

B

Thyroxin

C

Parathormone

D

Gastrin



5/5



5 min



Hint

Q : Targeted cells for inhibiting and releasing factors, which are released from the hypothalamus, are located in:

A

Posterior pituitary

B

Median pituitary

C

Anterior pituitary

D

Limbic system



Correct



Unattempted



Incorrect



1/5

Q : Which of the following is not correct about all hormones?

A

They are transferred by blood

B

They are protein in nature

C

They stimulate or inhibit the function

D

They affect different target cells

## Explanation

There are four types of hormones:

Protein, polypeptides, amino acid derivatives and steroids.



Correct



Unattempted



Incorrect



2/5

Q : Luteinizing hormone induces:



Flowering



Ovulation



Vernalization



Menopause

## Explanation

LH triggers ovulation and ovarian production of estrogen and progesterone in females. In males LH promotes testosterone production in interstitial cells of testes.





Correct



Unattempted



Incorrect



3/5

Q : Cause of Graves' disease is:



Exophthalmic- goiter



Decrease in BMR



Abnormal body protein



Cardiac failure

## Explanation

Graves' disease is an autoimmune disease. The serum of patients contain abnormal antibodies that mimic TSH and continuously stimulate thyroxine release.





Correct



Unattempted



Incorrect



4/5

Q : High levels of  $\text{Ca}^{+2}$  ions suppress the release of:



Calcitonin



Thyroxin



Parathormone



Gastrin

## Explanation

Calcitonin promotes calcium deposition into bones and inhibits calcium absorption by intestines and decreases its reabsorption by kidney tubules. Parathormone stimulates absorption of calcium in small intestine and also its reabsorption in the kidney tubules





Correct



Unattempted



Incorrect



5/5

Q : Targeted cells for inhibiting and releasing factors, which are released from the hypothalamus, are located in:



Posterior pituitary



Median pituitary



Anterior pituitary



Limbic system

## Explanation

Hypothalamus transport trophic factors via blood into the anterior pituitary where they regulate their target cells for secretion.



## QUIZZES

### Practice Test No. 33



5 Questions



5 min

#### Topics

Adrenals, Gut, Gonads, Feedback  
Mechanism, Comparison of Nervous  
Coordination and Chemical Coordination

[Start Quiz](#)



1/5



5 min



Hint

Q : Addison's disease is due to:

A

Destruction of the adrenal cortex

B

Excess secretion of MSH

C

Overproduction of corticosteroids

D

Under secretion of calcitonin



2/5



5 min



Hint

Q : \_\_\_\_\_ is hormone of stomach.



HCl



Gastrin



Secretin



Pepsin



3/5



5 min



Hint

Q : Castrated male has deficiency of:



Insulin



Glucagon



Cortisol



Testosterone



4/5



5 min



Hint

Q : The feedback mechanism is:

A

Controlled by brain

B

Controlled by the hormone

C

Controlled by the end product

D

Controlled by external stimulation



5/5



5 min



Hint

Q : Which of the following is not a similarity between nervous and chemical coordination?

A

Synthesize chemical messengers

B

Respond to internal &amp; external stimuli

C

Prolonged and delayed effects

D

Maintain homeostasis



Correct



Unattempted



Incorrect



1/5

Q : Addison's disease is due to:



Destruction of the adrenal cortex



Excess secretion of MSH



Overproduction of corticosteroids



Under secretion of calcitonin

## Explanation

The adrenal cortex secretes cortico-steroids such as cortisol, corticosterone, aldosterone and androgenic hormone. Its destruction leads to general metabolic disturbance, causing weakness of muscle action and loss of salts.





Correct



Unattempted



Incorrect



2/5

Q : \_\_\_\_\_ is hormone of stomach.



HCl



Gastrin



Secretin



Pepsin

## Explanation

G-cells are the endocrine cells present in mucosa of stomach in pyloric region that secrete gastrin to stimulate the secretion of gastric juice for the digestion of partially digested food.





Correct



Unattempted



Incorrect



3/5

Q : Castrated male has deficiency of:



Insulin



Glucagon



Cortisol



Testosterone

## Explanation

Castrated men experience a much-diminished sex drive, because their bodies have very low levels of the testosterone.

Surgical castration, also called orchiectomy, involves the physical removal of the testicles, which produce 95 percent of a man's testosterone.



Correct



Unattempted



Incorrect



4/5

Q : The feedback mechanism is:



Controlled by brain



Controlled by the hormone



Controlled by the end product



Controlled by external stimulation

## Explanation

The feedback mechanism is controlled by the products of reactions it is controlling.



Correct



Unattempted



Incorrect



5/5

Q : Which of the following is not a similarity between nervous and chemical coordination?



A Synthesize chemical messengers



B Respond to internal &amp; external stimuli



C Prolonged and delayed effects



D Maintain homeostasis

## Explanation

Nervous coordination has immediate effect or show response to a stimulus instantly due to electrochemical changes along length of neuron, whereas in chemical coordination mostly hormones have prolonged or delayed effects due to its synthesis, release, transport and effect.



## QUIZZES

### Practice Test No. 34



5 Questions



5 min

#### Topics

Innate Behaviour, Instincts and Learning,  
Imprinting

[Start Quiz](#)



1/5



5 min



Hint

Q : Which type of innate behavior is a directed movement toward or away from stimulus?



Imprinting



Kineses



Taxes



Classic conditioning



2/5



5 min



Hint

Q : The instincts are:



Based on learning



Based on experience



Genetically inherited



Based on I.Q





3/5



5 min



Hint

Q : Which is correct for learning behavior?

A

Product of natural selection

B

Related to history of species

C

Depend upon environmental influences

D

Advantageous for animals with no parental care





4/5



5 min



Hint

Q : Imprinting is:

A

Decline in response

B

Association of indifferent stimuli

C

Manipulation of mental concepts

D

Association with another object/ stimulus



5/5



5 min



Hint

Q : A young bird may consider an inanimate object as mother through:

A

Habituation

B

Imprinting

C

Learning

D

Extinct



Correct



Unattempted



Incorrect



1/5

Q : Which type of innate behavior is a directed movement toward or away from stimulus?



Imprinting



Kineses



Taxes



Classic conditioning

## Explanation

Taxes is a directional movement toward or away from a stimulus such as light, chemicals or heat.



Correct



Unattempted



Incorrect



2/5

Q : The instincts are:



Based on learning



Based on experience



Genetically inherited



Based on I.Q

## Explanation

Instincts are unlearned, inherited fixed action patterns of responses or reactions to certain kind of stimuli.





Correct



Unattempted



Incorrect



3/5

Q : Which is correct for learning behavior?

A

Product of natural selection

B

Related to history of species

C

Depend upon environmental influences

D

Advantageous for animals with no parental care

## Explanation

Learning behavior depends on the environmental influence, but the ability to modify the behavior depends on the heredity material.



Correct



Unattempted



Incorrect



4/5

Q : Imprinting is:

A

Decline in response

B

Association of indifferent stimuli

C

Manipulation of mental concepts

D

Association with another object/ stimulus

## Explanation

Imprinting is a type of learning in which a very young animal fixes its attention on the first object with which it has visual, auditory or tactile experience and follows it.



Correct



Unattempted



Incorrect



5/5

Q : A young bird may consider an inanimate object as mother through:



Habituation



Imprinting



Learning



Extinct

## Explanation

Imprinting is a type of learning in which a very young animal fixes its attention on the first object with which it has visual, auditory or tactile experience and follows it.







## QUIZZES

### Practice Test No. 35



5 Questions



5 min

#### Topics

Habituation, Conditioned Reflex Type I (Conditioning), Conditioned Reflex Type II (Operent Conditioning), Latent Learning, Insight Learning

[Start Quiz](#)





1/5



5 min



Hint

Q : Modification of behavior through a diminution of response to repeated stimuli is:



Learning



Habituation



Imprinting



Insight



2/5



5 min



Hint

Q : Kohler used chimpanzee to prove:



Habituation



Imprinting



Insight learning



Latent learning



3/5



5 min



Hint

Q : The type of learning in which the behavior of organism is modified to produced same response against different stimuli for survival is:



A Habituation



B Imprinting



C Conditioning



D Latent learning



4/5



5 min



Hint

Q : The learning with multiple trials and errors is \_\_\_\_\_ while \_\_\_\_\_ learning do not involve the patent incentive.

A

Conditioning, Latent learning

B

Latent learning, Operant learning

C

Operant learning, Latent learning

D

Latent learning, Insight learning



5/5



5 min



Hint

Q : The type of learning in association with indifferent stimuli or without patent reward is:

A

Habituation

B

Conditioning

C

Operant learning

D

Latent learning



Correct



Unattempted



Incorrect



1/5

Q : Modification of behavior through a diminution of response to repeated stimuli is:



Learning



Habituation



Imprinting



Insight

## Explanation

Habituation is highly adaptive and simplest form of learning.



Correct



Unattempted



Incorrect



2/5

Q : Kohler used chimpanzee to prove:



Habituation



Imprinting



Insight learning



Latent learning

## Explanation

Insight learning is learning by consequences. It is an extreme case of behavioral modification involving the application of insight or reasoning to a novel situation.





Correct



Unattempted



Incorrect



3/5

Q : The type of learning in which the behavior of organism is modified to produced same response against different stimuli for survival is:

A

Habituation

B

Imprinting

C

Conditioning

D

Latent learning

## Explanation

Conditioning or conditioned reflex type I involves the pairing of an irrelevant stimulus with primary stimulus that elicit the automatic response. This type of learning broadens the ability of an organism to react appropriately to environmental changes.





Correct



Unattempted



Incorrect



4/5

Q : The learning with multiple trials and errors is \_\_\_\_\_ while \_\_\_\_\_ learning do not involve the patent incentive.

A

Conditioning, Latent learning

B

Latent learning, Operant learning

C

Operant learning, Latent learning

D

Latent learning, Insight learning

## Explanation

Conditioning or operant learning is a complex type of learning in which organism learn through trial and errors along with patent reward while the learning without patent reward or incentive is called latent learning.

1

2

3

4

5



Correct



Unattempted



Incorrect



5/5

Q : The type of learning in association with indifferent stimuli or without patent reward is:

A

Habituation

B

Conditioning

C

Operant learning

D

Latent learning

## Explanation

Latent learning is defined as the association of indifferent stimuli or situation without patent reward.



## QUIZZES

### Practice Test 36



5 Questions



5 min

#### Topics

Reproduction in Plants, Parthenocarpy, Fruit  
Set and Fruit Ripening, Photoperiodism,  
Vernalization

[Start Quiz](#)



1/5



5 min



Hint

Q : Meiosis occurs in plants at the time of:

A

Gametogenesis

B

Sporogenesis

C

Both of these

D

Fertilization



2/5



5 min



Hint

Q : Hormones commonly inducing parthenocarpy are:

A

Auxins

B

Gibberellins

C

Cytokinins

D

Absciscic acids



3/5



5 min



Hint

Q : Developing seeds are rich source of:



Auxins



Cytokinins



Gibberellins



All of the above



4/5



5 min



Hint

Q : In photoperiodism, it was seen that during night break the treatment that determines response is:



Last light treatment



First light treatment



No treatment



Intermediate



5/5



5 min



Hint

Q : Low temperature stimulus is received by:



Leaves



Buds



Shoot apex of mature stem



Root





Correct



Unattempted



Incorrect



1/5

Q : Meiosis occurs in plants at the time of:



Gametogenesis



Sporogenesis



Both of these



Fertilization

## Explanation

Plants → Meiosis during sporogenesis.

Animals → Meiosis during gametogenesis.



Correct



Unattempted



Incorrect



2/5

Q : Hormones commonly inducing parthenocarpy are:



Auxins



Gibberellins



Cytokinins



Absciscic acids

Explanation





Correct



Unattempted



Incorrect



3/5

Q : Developing seeds are rich source of:



Auxins



Cytokinins



Gibberellins



All of the above

## Explanation

Developing seeds are rich with auxins, cytokinins and gibberellins because these growth substance are mainly associated with the development of embryo and accumulation of food reserves in seeds and pericarp.



Correct



Unattempted



Incorrect



4/5

Q : In photoperiodism, it was seen that during night break the treatment that determines response is:



Last light treatment



First light treatment



No treatment



Intermediate

## Explanation

During night, in short day plants, the light treatment disturb the biological clock and phytochrome conversion. This will, ultimately, halt flowering.





Correct



Unattempted



Incorrect



5/5

Q : Low temperature stimulus is received by:

A

Leaves

B

Buds

C

Shoot apex of mature stem

D

Root

## Explanation

In vernalisation low temperature stimulus is received by.

- Embryo of the seed
- Shoot apex of mature stem



## QUIZZES

### Practice Test 37



5 Questions



5 min

#### Topics

Reproduction in Animals, Asexual  
Reproduction, Identical & Fraternal Twins

[Start Quiz](#)



1/5



5 min



Hint

Q : Common methods of asexual reproduction are:

A

Tissue culturing

B

Identical twins

C

Cloning

D

All of the above



2/5



5 min



Hint

Q : All of the following animals show haploid parthenogenesis except:



Wasps



Aphids



Honey bees



Ants





3/5



5 min



Hint

Q : One parent is required for production of offsprings in:

A

Sexual reproduction

B

Asexual reproduction

C

Parthenocarpy

D

Both A and B



4/5



5 min



Hint

Q : Eggs are produced by honey bee through:

A

Mitosis

B

Meiosis

C

Amitosis

D

Binary fission



5/5



5 min



Hint

Q : Which types of twins are produced mitotically?

A

Identical twins

B

Fraternal twins

C

Both of these

D

None of the above



Correct



Unattempted



Incorrect



1/5

Q : Common methods of asexual reproduction are:



Tissue culturing



Identical twins



Cloning



All of the above

## Explanation

Asexual reproduction only involve mitosis. Therefore, the resultant cells or organism do not show genetic variations.



Correct



Unattempted



Incorrect



2/5

Q : All of the following animals show haploid parthenogenesis except:



Wasps



Aphids



Honey bees



Ants

## Explanation

Diploid number of chromosomes retain by total non-disjunction in egg producing cell. Therefore, this process is called diploid parthenogenesis.



Correct



Unattempted



Incorrect



3/5

Q : One parent is required for production of offsprings in:



Sexual reproduction



Asexual reproduction



Parthenocarpy



Both A and B

## Explanation

Asexual reproduction always involve mitosis, binary fission or budding etc.



Correct



Unattempted



Incorrect



4/5

Q : Eggs are produced by honey bee through:



Mitosis



Meiosis

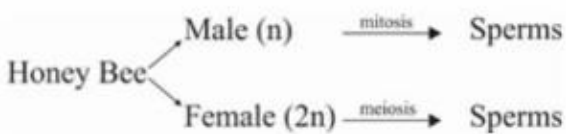


Amitosis



Binary fission

## Explanation





Correct



Unattempted



Incorrect



5/5

Q : Which types of twins are produced mitotically?



Identical twins



Fraternal twins



Both of these



None of the above

## Explanation

First cleavage in zygote produce identical blastomeres which give rise to similar organisms.





## QUIZZES

### Practice Test 38



5 Questions



5 min

#### Topics

Tissue Culture and Cloning

[Start Quiz](#)



1/5



5 min



Hint

Q : Rapid aging and low resistance to environmental stress and diseases are limitations of:



Parthenocarpy



Vernalization



Cloning



Tissue culturing



2/5



5 min



Hint

Q : Cloning has disadvantage/s:

A

Rapid aging

B

Low resistance to stress and disease

C

Genetic uniformity

D

All of the above



3/5



5 min



Hint

Q : Hormone/s required to stimulate tissue culture in plant cambium is/are:

A

Auxins and gibberellins

B

Gibberellins and cytokinins

C

IAA and cytokinins

D

IAA and ABA



4/5



5 min



Hint

Q : Limitations for commercial ventures of cloning is:

A

Rapid aging

B

Low resistance

C

Disease

D

All of the above



5/5



5 min



Hint

Q : What is the advantage of cloning?

A

Rapid aging

B

Resistance to environmental stress

C

Social acceptability

D

Rapid increase in number



Correct



Unattempted



Incorrect



1/5

Q : Rapid aging and low resistance to environmental stress and diseases are limitations of:

A

Parthenocarpy

B

Vernalization

C

Cloning

D

Tissue culturing

## Explanation

Genetically identical organisms are produced through cloning which are less resistant to environment and show rapid aging.



Correct



Unattempted



Incorrect



2/5

Q : Cloning has disadvantage/s:

A

Rapid aging

B

Low resistance to stress and disease

C

Genetic uniformity

D

All of the above

## Explanation

Clones are produced by mitosis which is an asexual mode of reproduction. Hence, there is no recombination occurs. So, the resultant organisms are identical and have less resistance to environment.





Correct



Unattempted



Incorrect



3/5

Q : Hormone/s required to stimulate tissue culture in plant cambium is/are:

A

Auxins and gibberellins

B

Gibberellins and cytokinins

C

**IAA and cytokinins**

D

IAA and ABA

## Explanation

Tissue culture is the growth of tissues or cells in an artificial medium.



Correct



Unattempted



Incorrect



4/5

Q : Limitations for commercial ventures of cloning is:



Rapid aging



Low resistance



Disease



All of the above

## Explanation

Genetically identical organisms are produced through cloning which are less resistant to environment and show rapid aging.



Correct



Unattempted



Incorrect



5/5

Q : What is the advantage of cloning?

A

Rapid aging

B

Resistance to environmental stress

C

Social acceptability

D

Rapid increase in number

## Explanation

Cloning is an asexual mode of reproduction. So, it is rapid as compared to sexual method.





## QUIZZES

### Practice Test 39



5 Questions



5 min

Topics

Sexual Reproduction

[Start Quiz](#)



1/5



5 min



Hint

Q : External fertilization occurs in:

A

Terrestrial environment

B

Aquatic environment

C

In the reproductive tract of female

D

Aerial environment



2/5



5 min



Hint

Q : The one which is not right about gametogenesis in animals:

A

It occurs by meiosis

B

It produces 4 gametes/cell

C

Number of chromosomes is reduced to half

D

It maintains similarities



3/5



5 min



Hint

Q : Sexual reproduction usually involves \_\_\_\_ parents:



One



Two



Three



Four



4/5



5 min



Hint

Q : The advance form of sexual reproduction is:

A

Tissue culturing

B

Identical twins

C

Unisexuality

D

Bisexuality





5/5



5 min



Hint

Q : Ovoviviparous is shown by:

A

Reptiles

B

Duck bill platypus

C

Birds

D

Human



Correct



Unattempted



Incorrect



1/5

Q : External fertilization occurs in:

A

Terrestrial environment

B

Aquatic environment

C

In the reproductive tract of female

D

Aerial environment

## Explanation

Amphibians and fish show external fertilization.



Correct



Unattempted



Incorrect



2/5

A

It occurs by meiosis

B

It produces 4 gametes/cell

C

Number of chromosomes is reduced to half

D

It maintains similarities

## Explanation

Gametes are produced by meiosis, so genetic variability occur.



Correct



Unattempted



Incorrect



2/5

Q : The one which is not right about gametogenesis in animals:



It occurs by meiosis



It produces 4 gametes/cell



Number of chromosomes is reduced to half



It maintains similarities

## Explanation

Gametes are produced by meiosis, so genetic variability occur.



Correct



Unattempted



Incorrect



3/5

Q : Sexual reproduction usually involves \_\_\_\_ parents:



One



Two



Three



Four

### Explanation

Male → Sperm  
Female → Ova

Sperm and Ova join to form a Zygote.



Correct



Unattempted



Incorrect



4/5

Q : The advance form of sexual reproduction is:

A

Tissue culturing

B

Identical twins

C

Unisexuality

D

Bisexuality

## Explanation

Unisexuality is a modern form of sexual reproduction.





Correct



Unattempted



Incorrect



5/5

Q : Ovoviviparous is shown by:



Reptiles



Duck bill platypus



Birds



Human

## Explanation

Aplacental viviparity is a mode of reproduction in animals in which embryo develop inside the shelled egg and the organism lay shelled egg having developed child.





## QUIZZES

### Practice Test 40



5 Questions



5 min

#### Topics

Male Reproductive System, Female  
Reproductive System, Oogenesis, Female  
Reproductive Cycle, Birth

**Start Quiz**





1/5



5 min



Hint

Q : Fluid secreted by sertoli cells provide liquid medium protection and nourishment to:



Oocytes



Sperms



Polar bodies



Spermatids



2/5



5 min



Hint

Q : In human females, additional but temporary endocrine structure is/are:

A

Corpus luteum

B

Placenta

C

Ovary

D

Both A and B



3/5



5 min



Hint

Q : Germ cells in the ovary produce many:

A

Spermatogonia

B

Zoospores

C

Zygospores

D

Oogonia



4/5



5 min



Hint

Q : Oestrous cycle is a reproductive cycle found in all female mammals except:



Cat



Monkey



Dog



Human



5/5



5 min



Hint

Q : The total gestation period in human female is about:



28



120



180



280



Correct



Unattempted



Incorrect



1/5

Q : Fluid secreted by sertoli cells provide liquid medium protection and nourishment to:



Oocytes



Sperms



Polar bodies



Spermatids

## Explanation

Sertoli cells nourish spermatogonia which remain attached to them until they are converted into sperms.



Correct



Unattempted



Incorrect



2/5

Q : In human females, additional but temporary endocrine structure is/are:



Corpus luteum



Placenta



Ovary



Both A and B

## Explanation

Corpus luteum develop after ovulation and degenerated at the end of secretory phase while placenta develop during first trimester of pregnancy and break at the time of birth.



Correct



Unattempted



Incorrect



3/5

Q : Germ cells in the ovary produce many:

A

Spermatogonia

B

Zoospores

C

Zygospores

D

Oogonia

## Explanation

Oogonia are diploid cells produce mitotically from germinal epithelium cells.





Correct



Unattempted



Incorrect



4/5

Q : Oestrous cycle is a reproductive cycle found in all female mammals except:



Cat



Monkey



Dog



Human

## Explanation

Human female show menstrual cycle which repeated after 28 days in most of females.



Correct



Unattempted



Incorrect



5/5

Q : The total gestation period in human female is about:



28



120



180



280

## Explanation

Normally it takes 280 days after fertilization to develop complete organism in humans.





## QUIZZES

### Practice Test 41



2 Questions



5 min

Topics

Test Tube Babies

[Start Quiz](#)



1/2



5 min



Hint

Q : Babies produced by *in vitro* fertilization are called:

A

Blue babies

B

Test tube babies

C

Yellow babies

D

None of the above



2/2



5 min



Hint

Q : In case of test tube babies, fertilization occur in:



Vitro



Vivo



Mother's body



Both A and B



Correct



Unattempted



Incorrect



1/2

Q : Babies produced by *in vitro* fertilization are called:

A

Blue babies

B

Test tube babies

C

Yellow babies

D

None of the above

## Explanation

Successful fusion of sperm and ova outside female body results in test tube babies.





Q : In case of test tube babies, fertilization occur in:

A

Vitro

B

Vivo

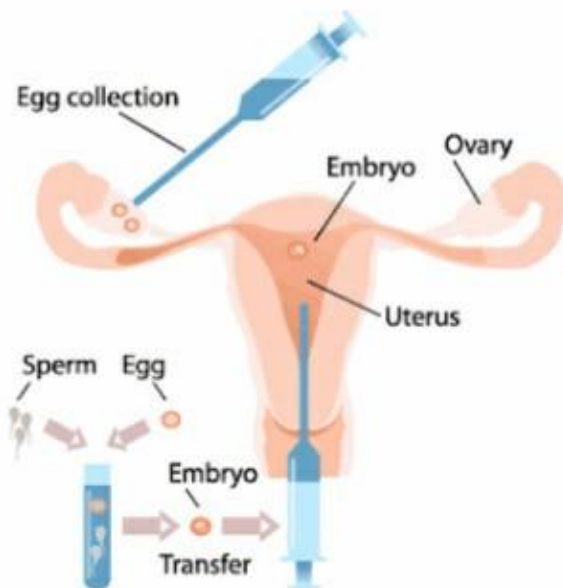
C

Mother's body

D

Both A and B

## Explanation





## QUIZZES

### Practice Test 42



5 Questions



5 min

#### Topics

Sexually Transmitted Diseases (STDs)

[Start Quiz](#)





1/5



5 min



Hint

Q : Causative agent of genital herpes is a:



Virus



Bacteria



Fungi



Protozoan



2/5



5 min



Hint

Q : A spirochaete, *Treponema pallidum*, causes:

A

Genital herpes

B

Gonorrhea

C

Syphilis

D

AIDS



3/5



5 min



Hint

Q : Gonorrhea is caused by a:

A

*Neisseria*

B

*T. pallidum*

C

Herpes simplex

D

*Clostridium*



4/5



5 min



Hint

Q : Syphilis is caused by a spirochete named as:

A

*Nisseria gonorrheae*

B

*Treponema pallidum*

C

*Escherechia coli*

D

*Hyphomicrobium*



5/5



5 min



Hint

Q : *Treponema pallidum* causes:

A

Syphilis

B

Gonorrhoea

C

AIDS

D

Genital herpes



Correct



Unattempted



Incorrect



1/5

Q : Causative agent of genital herpes is a:



Virus



Bacteria



Fungi



Protozoan

## Explanation

Genital herpes is STD and is caused by Herpes Simplex-2 virus.



Correct



Unattempted



Incorrect



2/5

Q : A spirochaete, *Treponema pallidum*, causes:

A

Genital herpes

B

Gonorrhea

C

Syphilis

D

AIDS

## Explanation

*Treponema pallidum* is bacteria responsible for syphilis.



Correct



Unattempted



Incorrect



3/5

Q : Gonorrhea is caused by a:

*Neisseria**T. pallidum*

Herpes simplex

*Clostridium*

## Explanation

Gram positive bacteria is causative agent of gonorrhoea.







Correct



Unattempted



Incorrect



4/5

Q : Syphilis is caused by a spirochete named as:

A

*Nisseria gonorrheae*

B

*Treponema pallidum*

C

*Escherechia coli*

D

*Hyphomicrobium*

## Explanation

*Treponema pallidum* is a bacteria responsible for syphilis.

1

2

3

4

5





Correct



Unattempted



Incorrect



5/5

Q : *Treponema pallidum* causes:



Syphilis



Gonorrhoea



AIDS



Genital herpes

## Explanation

Syphilis is caused by a spirocheate, *Treponema pallidum*.



## QUIZZES

### Practice Test 43



5 Questions



5 min

#### Topics

Growth and Development in Plants, Role of  
Meristem

[Start Quiz](#)



1/5



5 min



Hint

Q : The open growth is found in plants due to growing point:

A

Shoot Apical Meristem

B

Root Apical Meristem

C

Vascular cambium

D

All of the above



2/5



5 min



Hint

Q : What is not true about growth in plants?

A

It has an open pattern

B

Growth rate is uniform

C

It is initially slow

D

Gradually it becomes rapid



3/5



5 min



Hint

Q : At what stage the cell wall of tracheids become thicker in spatial dimensions?

A

Cell Division

B

Cell elongation

C

Cell Maturation

D

Cell differentiation



4/5



5 min



Hint

Q : Which one is not the feature of Zone of cell division?

A

Non-vacuolated cells

B

Synthesis of cytoplasm

C

Formation of root hairs

D

Synthesis of cell wall material



5/5



5 min



Hint

Q : Increase in thickness of plant is called:

A

Open growth

B

Primary growth

C

Secondary growth

D

Stunted growth





Correct



Unattempted



Incorrect



1/5

Q : The open growth is found in plants due to growing point:

A

Shoot Apical Meristem

B

Root Apical Meristem

C

Vascular cambium

D

All of the above

## Explanation

Open growth is the capacity of continuous dividing and producing new cells, it is limited to meristems of plants.



Correct



Unattempted



Incorrect



2/5

Q : What is not true about growth in plants?



It has an open pattern



Growth rate is uniform



It is initially slow



Gradually it becomes rapid

## Explanation

Plants have open pattern of growth which is initially slow, then rapid and at the end again slow.



Correct



Unattempted



Incorrect



3/5

Q : At what stage the cell wall of tracheids become thicker in spatial dimensions?



Cell Division



Cell elongation



Cell Maturation



Cell differentiation

## Explanation

The process in which unspecialized cells become mature and able to perform designated function is called differentiation.



Correct



Unattempted



Incorrect



4/5

Q : Which one is not the feature of Zone of cell division?

A

Non-vacuolated cells

B

Synthesis of cytoplasm

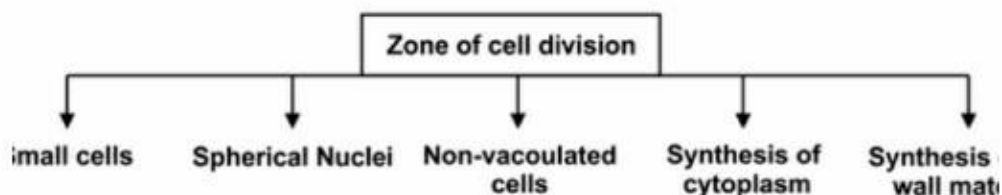
C

Formation of root hairs

D

Synthesis of cell wall material

## Explanation





Correct



Unattempted



Incorrect



5/5

Q : Increase in thickness of plant is called:



Open growth



Primary growth



Secondary growth



Stunted growth

## Explanation

Secondary growth results from the divisions of cell in lateral meristem and results in thickness of stem and root.



## QUIZZES

### Practice Test 44



5 Questions



5 min

#### Topics

Conditions of Growth, Differentiation, Growth  
Correlations

**Start Quiz**



1/5



5 min



Hint

Q : In Plants which light enhances cell division?

A

Infrared

B

Blue

C

Red

D

Ultraviolet



2/5



5 min



Hint

Q : Which is the condition that will inhibit the synthesis of vitamins in plants?



Light



Dark



Water



Oxygen





3/5



5 min



Hint

Q : Point out one of the following pairs which is not true:

A

Cork Cambium and Bark

B

Vascular Cambium and Xylem

C

Root Apical Meristem and Tap Root

D

Pericycle and leaves



4/5



5 min



Hint

Q :

What is the alternative name of root cambium?

A

Endodermis

B

Pericycle

C

Pith

D

Cortex



5/5



5 min



Hint

Q : In plants with dense growth of lateral branches, apical dominance is:

A

Very high

B

Very little

C

Moderate

D

Absent



Incorrect



1/5

Q : In Plants which light enhances cell division?

A

Infrared

B

Blue

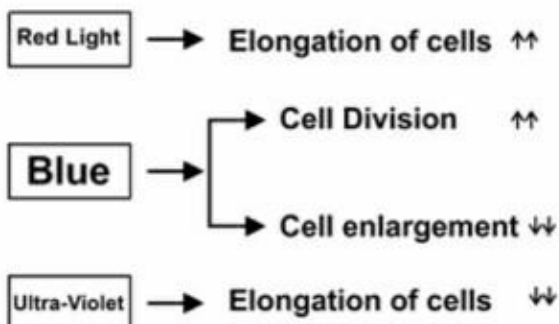
C

Red

D

Ultraviolet

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Which is the condition that will inhibit the synthesis of vitamins in plants?



Light



Dark



Water



Oxygen

## Explanation

Most of the organic compounds are synthesized in the presence of light.



Correct



Unattempted



Incorrect



3/5

Q : Point out one of the following pairs which is not true:

A

Cork Cambium and Bark

B

Vascular Cambium and Xylem

C

Root Apical Meristem and Tap Root

D

Pericycle and leaves

## Explanation

Pericycle is a root meristem and involve in formation of lateral root while leaf arise form leaf primordia.



Correct



Unattempted



Incorrect



4/5

Q:

What is the alternative name of root cambium?



Endodermis



Pericycle



Pith



Cortex

## Explanation

Pericycle is a thin layer of plant tissue between the endodermis and the phloem. the main function of pericycle is to provide support,

1

2

3

4

5



Correct



Unattempted



Incorrect



4/5

Q:

What is the alternative name of root cambium?

A

Endodermis

B

Pericycle

C

Pith

D

Cortex

## Explanation

Pericycle is a thin layer of plant tissue between the endodermis and the phloem. the main function of pericycle is to provide support, protection and structure to plants.

1

2

3

4

5







Correct



Unattempted



Incorrect



5/5

Q : In plants with dense growth of lateral branches, apical dominance is:



Very high



Very little



Moderate



Absent

## Explanation

Lateral branches show dense growth when plant is get free from apical dominance. Auxin move to lateral buds and show growth.



## QUIZZES

### Practice Test 45



5 Questions



5 min

#### Topics

Growth and Development in Animals,  
Development of Chick (Fertilization  
& Incubation), Development of Chick  
(Cleavage, Morulla, Blastula)

[Start Quiz](#)



1/5



5 min



Hint

Q : \_\_\_\_\_ is the study of growth and differentiation undergone by an organism during development.



Embryology



Gerontology



Teratology



Physiology



2/5



5 min



Hint

Q : The shell of chick egg is secreted as egg passes through:



Oviduct



Uterus



Ovary



Fallopian tube



3/5



5 min



Hint

Q : Incubation duration of chick is:



15 days



18 days



21 days



28 days



4/5



5 min



Hint

Q : Blastomere are formed during:

A

Cleavage

B

Gastrulation

C

Growth

D

Fertilization



5/5



5 min



Hint

Q : The first two cleavages of hen's egg are vertical and 3<sup>rd</sup> one is:

A

Vertical

B

At vegetal pole

C

Parallel to the surface

D

Diagonal to first one



Correct



Unattempted



Incorrect



1/5

Q : \_\_\_\_\_ is the study of growth and differentiation undergone by an organism during development.



Embryology



Gerontology



Teratology



Physiology

## Explanation

Development in an ordered sequence of irreversible steps, with each step setting up the necessary conditions for the next step during course of development organisms are formed from a single fertilized egg into a highly complex and an independent living being like his parents.





Correct



Unattempted



Incorrect



2/5

Q : The shell of chick egg is secreted as egg passes through:



Oviduct



Uterus



Ovary



Fallopian tube

## Explanation

Uterus contain shell secreting glands. When egg pass through uterus a calcium carbonate composed shell is formed.





Correct



Unattempted



Incorrect



3/5

Q : Incubation duration of chick is:



15 days



18 days



21 days



28 days

## Explanation

Hen incubate egg for 21 days at  $36-38^{\circ}\text{C}$  for the development of chick.



Correct



Unattempted



Incorrect



4/5

Q : Blastomere are formed during:



Cleavage



Gastrulation



Growth



Fertilization

## Explanation

After fertilization, the egg undergoes a series of mitotic division, called cleavage that result into the formation of blastomeres.



Correct



Unattempted



Incorrect



5/5

Q : The first two cleavages of hen's egg are vertical and 3<sup>rd</sup> one is:



Vertical



At vegetal pole



Parallel to the surface



Diagonal to first one

## Explanation

The first two cleavage planes are vertical while the 3<sup>rd</sup> runs horizontally parallel.



## QUIZZES

### Practice Test 46



5 Questions



5 min

#### Topics

Development of Chick (Gastrulation),  
Development of Chick (Notochord &  
Mesoderm Formation), Development of  
Chick (Neurulation)

**Start Quiz**



1/5



5 min



Hint

Q : What type of process is responsible for the development of germinal layers in the developing embryo?

A

Gametogenesis

B

Cleavage Formation

C

Gastrulation

D

Organogenesis



2/5



5 min



Hint

Q : Primitive gut is:

A

Segmentation cavity

B

Blastocoel

C

Gastrocoel

D

Coelomic space



3/5



5 min



Hint

Q : Dorsal mesoderm is organized into:

A

Splanchnic mesoderm

B

Somatic mesoderm

C

Somite

D

Neural folds





4/5



5 min



Hint

Q : Lateral plate mesoderm forms:



Somite



Splanchnic mesoderm



Somatic mesoderm



Both B and C



5/5



5 min



Hint

Q : Neural groove is evident in embryos of:



18 hrs



18-20 hrs



21-22 hrs



24 hrs



Correct



Unattempted



Incorrect



1/5

Q : What type of process is responsible for the development of germinal layers in the developing embryo?



Gametogenesis



Cleavage Formation



Gastrulation



Organogenesis

## Explanation

Gastrulation is characterized by the movement and rearrangement of cells in embryo forming epiblast and hypoblast.



Correct



Unattempted



Incorrect



2/5

Q : Primitive gut is:

A

Segmentation cavity

B

Blastocoel

C

Gastrocoel

D

Coelomic space

## Explanation

Separation of blastoderm from yolk at gastrula stage give rise to a fluid filled cavity called gastrocoel.





Correct



Unattempted



Incorrect



3/5

Q : Dorsal mesoderm is organized into:



Splanchnic mesoderm



Somatic mesoderm



Somite



Neural folds

## Explanation

Hensen's node contains mesoderm forming cells which break and organize into somite.



Correct



Unattempted



Incorrect



4/5

Q : Lateral plate mesoderm forms:



Somite



Splanchnic mesoderm



Somatic mesoderm



Both B and C

## Explanation

Dorsal mesoderm organize into masses of cells called somites while lateral plate splits into splanchnic and somatic mesoderm which give rise to body cavity called coelom.



Correct



Unattempted



Incorrect



5/5

Q : Neural groove is evident in embryos of:



18 hrs



18-20 hrs



21-22 hrs



24 hrs

## Explanation

Invagination of neural plate forms a groove that called neural groove that will be converted into neural tube. At this stage embryo would be called as neurula.



## QUIZZES

### Practice Test 47



5 Questions



5 min

#### Topics

Mechanism of Development, Role of  
Cytoplasm in Development, Role of Nucleus  
in Development, Concept of Differentiation,  
Embryonic Induction

[Start Quiz](#)





1/5



5 min



Hint

Q : Spemann experiments explain role of \_\_\_\_\_ in development.



Nucleus



Cytoplasm



Both A and B



None of these



2/5



5 min



Hint

Q : Grey equatorial cytoplasm gives rise to:

A

Notochord and neural tube

B

Muscle cells and guts

C

Skeleton and muscles

D

Gut and neural tube



3/5



5 min



Hint

Q : In *Acetabularia*, the cap development is controlled by:

A

Nucleus

B

Cytoplasm

C

Mitochondria

D

Cell wall



4/5



5 min



Hint

Q : Differentiation is:

A

Process through an organism acquires its adult form

B

Process of formation of specialized tissue

C

Process of formation of zygote

D

Fusion of sperm with egg



5/5



5 min



Hint

Q : Area of blastopore that is involved in embryonic induction is:

A

Dorsal lip area

B

Ventral lip area

C

Lateral lip area

D

Medial lip area



Correct



Unattempted



Incorrect



1/5

Q : Spemann experiments explain role of \_\_\_\_\_ in development.



Nucleus



Cytoplasm



Both A and B



None of these

## Explanation

Cytoplasm and nucleus both have morphogenetic determinants which play important role in development.



Correct



Unattempted



Incorrect



2/5

Q : Grey equatorial cytoplasm gives rise to:



Notochord and neural tube



Muscle cells and guts



Skeleton and muscles



Gut and neural tube

## Explanation

Cytoplasm contains different cytoplasmic determinants which impart specific color to the region. Hence play different role in development i.e. larval epidermis, muscle cells, gut, notochord and neural tube.



Correct



Unattempted



Incorrect



3/5

Q : In *Acetabularia*, the cap development is controlled by:



Nucleus



Cytoplasm



Mitochondria



Cell wall

## Explanation

Irrespective of the fact to species the cytoplasm belongs, the genes were able to express according to the type of nucleus.







Correct



Unattempted



Incorrect



4/5

Q : Differentiation is:

A

Process through an organism acquires its adult form

B

Process of formation of specialized tissue

C

Process of formation of zygote

D

Fusion of sperm with egg

## Explanation

Differentiation is a process which involve the conversion of unspecialized cells i.e. zygote into specialized tissues or cell.



Correct



Unattempted



Incorrect



5/5

Q : Area of blastopore that is involved in embryonic induction is:



Dorsal lip area



Ventral lip area



Lateral lip area



Medial lip area

## Explanation

Medial lip area



## QUIZZES

### Practice Test 48



5 Questions



5 min

#### Topics

Aging, Regeneration

[Start Quiz](#)



1/5



5 min



Hint

Q : Which one is not the sign of aging?

A

Loss of agility

B

Poor vision

C

Degeneration of cartilage

D

Loss of pigmented area on skin



2/5



5 min



Hint

Q : All of these are symptoms of aging except:

A

Loss of hair pigment

B

Loss of agility

C

Good vision

D

Dryness of skin



3/5



5 min



Hint

Q : The unspecialized cells present in flatworms and planaria are:



Neoblast



Osteoblast



Osteoclast



Chondrocyte



4/5



5 min



Hint

Q :

Greatest power of regeneration is found in:

A

Man

B

Sponge

C

Lizard

D

Fish



5/5



5 min



Hint

Q :

Healing of fractured bone is an example of:

A

Degeneration

B

Aging

C

Regeneration

D

Abnormal development





Correct



Unattempted



Incorrect



1/5

Q : Which one is not the sign of aging?



Loss of agility



Poor vision



Degeneration of cartilage



Loss of pigmented area on skin

## Explanation

Loss of agility, poor vision and degeneration of cartilage are signs of aging while loss of pigmented area is not related to aging.





Correct



Unattempted



Incorrect



2/5

Q : All of these are symptoms of aging except:



Loss of hair pigment



Loss of agility



Good vision



Dryness of skin

## Explanation

Aging is negative physiological changes in body which includes loss of hair, loss of agility, arteriosclerosis, loss of hair pigments, degeneration of cartilage etc.



Correct



Unattempted



Incorrect



3/5

Q : The unspecialized cells present in flatworms and planaria are:



Neoblast



Osteoblast



Osteoclast



Chondrocyte

## Explanation

Neoblasts are always present in the body of adult and are mobilized and migrate to the site of amputation where they differentiate into specialized cell type.



Correct



Unattempted



Incorrect



4/5

Q:

Greatest power of regeneration is found in:

A

Man

B

Sponge

C

Lizard

D

Fish

## Explanation

Regeneration capability is maximum in simple organisms while it is less in complex ones. Sponges are simple organisms; hence they have maximum regeneration ability.

1

2

3

4

5





Correct



Unattempted



Incorrect



5/5

Q:

Healing of fractured bone is an example of:

A

Degeneration

B

Aging

C

Regeneration

D

Abnormal development

## Explanation

(a) Hematoma formation



(b) Soft callus formation



(c) Hard callus formation



Q:

Healing of fractured bone is an example of:

A

Degeneration

B

Aging

C

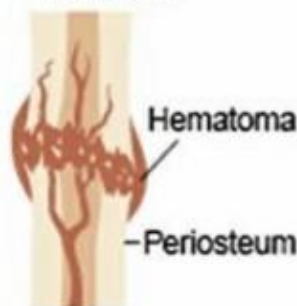
Regeneration

D

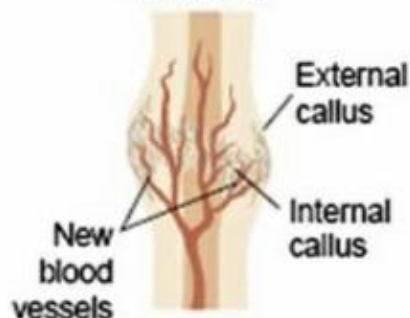
Abnormal development

## Explanation

(a) Hematoma formation



(b) Soft callus formation



(c) Hard callus formation





## QUIZZES

### Practice Test 49



5 Questions



5 min

Topics

Abnormal Development

[Start Quiz](#)





1/5



5 min



Hint

Q:

In microcephaly the individuals are born with small:

A

Eyes

B

Hands

C

Legs

D

Skull





2/5



5 min



Hint

Q:

\_\_\_\_\_ is a condition in which individual have small skull.

A

Klinefelter's syndrome

B

Cleft palate

C

Microcephaly

D

Turner's syndrome



3/5



5 min



Hint

Q : Nutritional deficiencies during development affect the:

A

Differentiation

B

Organogenesis

C

Metabolism

D

Both a and b



4/5



5 min



Hint

Q : Which one is the cause of Klinefelter's syndrome?

A

Metabolic defect

B

Environmental factor

C

Defective single gene

D

Abnormal number of chromosomes



5/5



5 min



Hint

Q :

Which one is the cause of Klinefelter's syndrome?

A

Metabolic

B

Environmental factor

C

Defective single gene

D

Non-disjunction

Q :

In microcephaly the individuals are born with small:

A

Eyes

B

Hands

C

Legs

D

Skull

## Explanation



Q:

\_\_\_\_\_ is a condition in which individual have small skull.

A

Klinefelter's syndrome

B

Cleft palate

C

Microcephaly

D

Turner's syndrome

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : Nutritional deficiencies during development affect the:

A

Differentiation

B

Organogenesis

C

Metabolism

D

Both a and b

## Explanation

Organogenesis involves the formation of body organs via differentiation. This process requires proper balance diet.



Correct



Unattempted



Incorrect



4/5

Q : Which one is the cause of Klinefelter's syndrome?



Metabolic defect



Environmental factor



Defective single gene



Abnormal number of chromosomes

## Explanation

Chromosomal non-disjunction is responsible for abnormal number of chromosomes in daughter cells. Such as Klinefelter's syndrome (XXY), Turner syndrome and Jacobs syndrome.







Correct



Unattempted



Incorrect



5/5

Q:

Which one is the cause of Klinefelter's syndrome?

A

Metabolic

B

Environmental factor

C

Defective single gene

D

Non-disjunction

## Explanation

Chromosomal non-disjunction is responsible for abnormal number of chromosomes which might be trisomy or monosomy. Klinefelter's and Down's syndrome are due to trisomy while Turner's syndrome is an example of monosomy.



## QUIZZES

### Practice Test 50



5 Questions



5 min

#### Topics

Introduction & Types of Chromosomes

[Start Quiz](#)



1/5



5 min



Hint

Q : The number of chromosomes in frog are:



6



26



40



46



2/5



5 min



Hint

Q : Karyotypes show marked differences among:

A

Individuals of different species

B

Individual of same species

C

Both a and b

D

None of these



3/5



5 min



Hint

Q : Centromere is also known as:



Centrosome



Primary constriction



Secondary constriction



Centriole



4/5



5 min



Hint

Q : Number of chromosomal pairs in humans are:



23



46



92



26



5/5



5 min



Hint

Q : In 1882, chromosomes were first observed by:

A

John Brown

B

T.H. Morgan

C

Walther Fleming

D

Walter Sutton



Correct



Unattempted



Incorrect



1/5

Q : The number of chromosomes in frog are:



6



26



40



46

## Explanation

Somatic cells of mouse contain 26 chromosomes while germ cells contain 13 chromosomes.





Correct



Unattempted



Incorrect



2/5

Q : Karyotypes show marked differences among:

A

Individuals of different species

B

Individual of same species

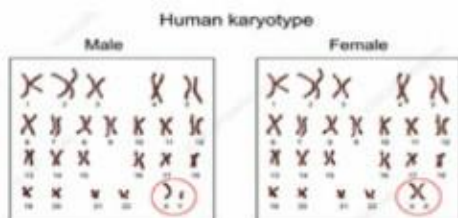
C

Both a and b

D

None of these

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : Centromere is also known as:



Centrosome



Primary constriction

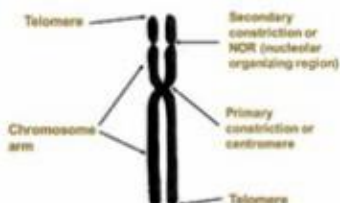


Secondary constriction



Centriole

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Number of chromosomal pairs in humans are:



23



46



92



26

## Explanation

Somatic cells of human have 46 chromosomes or 23 pairs (diploid), while germ cells have 23 chromosomes (haploid).



Correct



Unattempted



Incorrect



5/5

Q : In 1882, chromosomes were first observed by:

A

John Brown

B

T.H. Morgan

C

Walther Fleming

D

Walter Sutton

## Explanation

Walther Fleming was the first who observed the chromosomal movements in the process of mitosis in salamander.



## QUIZZES

### Practice Test 51



5 Questions



5 min

#### Topics

Composition of Chromosome

[Start Quiz](#)



1/5



5 min



Hint

Q : Chromosomal part which uncoils, during interphase is called:

A

Euchromatin

B

Heterochromatin

C

Chromatids

D

Satellite DNA



2/5



5 min



Hint

Q : Unlike most proteins, histones are \_\_\_\_\_.

A

Positively charged

B

Negatively charged

C

Neutral

D

Discharged



3/5



5 min



Hint

Q : Which portion of chromatin is condensed only during cell division:

A

Euchromatin

B

Heterochromatin

C

Both of these

D

None of these





4/5



5 min



Hint

Q : The protein of a nucleosome is:

A

Histone

B

Keratin

C

Insulin

D

Myoglobin



5/5



5 min



Hint

Q : %age of DNA in chromosome is:



20%



40%



60%



80%



Correct



Unattempted



Incorrect



1/5

Q : Chromosomal part which uncoils, during interphase is called:



A Euchromatin



B Heterochromatin



C Chromatids



D Satellite DNA

## Explanation

Highly condensed portions of the chromatin are called **heterochromatin**. Some of these portions remain permanently condensed, so that their DNA is never expressed. The remainder of the chromosome called **euchromatin** is condensed only during cell division.





Correct



Unattempted



Incorrect



2/5

Q : Unlike most proteins, histones are \_\_\_\_\_.



Positively charged



Negatively charged



Neutral



Discharged

## Explanation

Due to abundance of basic amino acids like arginine and lysine histone is positively charged.



Correct



Unattempted



Incorrect



3/5

Q : Which portion of chromatin is condensed only during cell division:



A Euchromatin



B Heterochromatin



C Both of these



D None of these

## Explanation

Highly condensed portions of the chromatin are called heterochromatin. Some of these portions remain permanently condensed, so that their DNA is never expressed. The remainder of the chromosome called euchromatin is condensed only during cell division.





Correct



Unattempted



Incorrect



4/5

Q : The protein of a nucleosome is:



Histone



Keratin



Insulin



Myoglobin

## Explanation

In nucleosomes DNA is coiled over 8 histone protein molecules.



Correct



Unattempted



Incorrect



5/5

Q : %age of DNA in chromosome is:



20%



40%



60%



80%

### Explanation

Content of protein (60%) is 1.5 times more the DNA (40%) in chromosomes.





## QUIZZES

### Practice Test 52



5 Questions



5 min

#### Topics

The Chromosomal Theory of Inheritance

[Start Quiz](#)





1/5



5 min



Hint

Q : A central role for chromosomes in heredity was first suggested in 1900 by:

A

Karl Correns

B

W.S. Sutton

C

T.H. Morgan

D

F. Griffith



2/5



5 min



Hint

Q : Chromosomal theory of inheritance was first formulated by:



Karl Correns



T. H. Morgan



Calvin Bridges



W. Sutton



3/5



5 min



Hint

Q : Mendelian traits do reside on chromosomes. It was proved by:



W.S Sutton



Karl Correns



Mendel



T.H. Morgan



4/5



5 min



Hint

Q : Chromosomal theory of inheritance was proved experimentally by:



W.S. Sutton



Karl Correns



Alfred Hershey



T.H. Morgan



5/5



5 min



Hint

Q : The gene for the color of eye of *Drosophila* resides on:

A

Autosomal chromosome

B

X-chromosomes

C

Y-chromosomes

D

Both X &amp; Y



Correct



Unattempted



Incorrect



1/5

Q : A central role for chromosomes in heredity was first suggested in 1900 by:



Karl Correns



W.S. Sutton



T.H. Morgan



F. Griffith

## Explanation

A central role for chromosomes in heredity was first suggested in 1900 by the German geneticist Karl Correns, in one of the papers announcing the rediscovery of Mendel's work.





Correct



Unattempted



Incorrect



2/5

Q : Chromosomal theory of inheritance was first formulated by:



Karl Correns



T. H. Morgan



Calvin Bridges



W. Sutton

## Explanation

The observations that similar chromosomes paired with one another during meiosis led directly to the chromosomal theory of inheritance, first formulated by the American Walter Sutton in 1902.



Correct



Unattempted



Incorrect



3/5

Q : Mendelian traits do reside on chromosomes. It was proved by:

A

W.S Sutton

B

Karl Correns

C

Mendel

D

T.H. Morgan

## Explanation

T. H. Morgan's experiment was one of the most important in the history of genetics because it presented the first clear evidence that the genes determining Mendelian traits do indeed reside on the chromosomes.





Correct



Unattempted



Incorrect



4/5

Q : Chromosomal theory of inheritance was proved experimentally by:



W.S. Sutton



Karl Correns



Alfred Hershey



T.H. Morgan

## Explanation

In 1910 Thomas Hunt Morgan, studying the fruit fly, *Drosophila melanogaster*, and experimentally prove the chromosomal theory of inheritance.





Correct



Unattempted



Incorrect



5/5

Q : The gene for the color of eye of *Drosophila* resides on:



Autosomal chromosome



X-chromosomes



Y-chromosomes



Both X &amp; Y

## Explanation

The gene controlling the eye colour in *Drosophila* resides on the X chromosome. It is absent on Y- chromosome.





## QUIZZES

### Practice Test 53



5 Questions



5 min

#### Topics

DNA as Heredity Material, Chemical Nature of  
DNA

[Start Quiz](#)



1/5



5 min



Hint

Q : In Hershey and Chase experiment DNA is labeled with:

 $P^{35}$  $S^{32}$  $S^{35}$  $P^{32}$



2/5



5 min



Hint

Q : Phosphodiester linkage is represented by:



O-C-O



P-O-C



-N-H-



Pair of P-O-C



3/5



5 min



Hint

Q : All of these nitrogenous bases are found in DNA except:



T



C



G



U



4/5



5 min



Hint

Q : All of these are pyrimidine except:



A



C



T



U



5/5



5 min



Hint

Q : 5 carbon sugar in DNA is:

A

Ribose

B

Maltose

C

Fructose

D

Deoxyribose





Correct



Unattempted



Incorrect

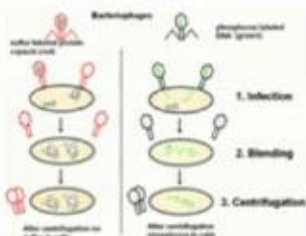


1/5

Q : In Hershey and Chase experiment DNA is labeled with:

 $P^{35}$  $S^{32}$  $S^{35}$  $P^{32}$ 

## Explanation





Incorrect



2/5

Q : Phosphodiester linkage is represented by:

A

O-C-O

B

P-O-C

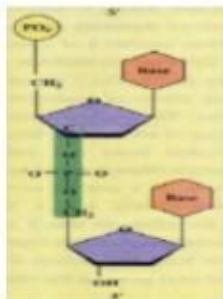
C

-N-H-

D

Pair of P-O-C

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : All of these nitrogenous bases are found in DNA except:



T



C



G



U

## Explanation

Double ring nitrogenous bases are purines (adenine and guanine) and single ring nitrogenous bases are pyrimidines (thymine, cytosine and uracil in RNA instead of thymine).





Correct



Unattempted



Incorrect



4/5

Q : All of these are pyrimidine except:



A



C



T



U

## Explanation

Double ring nitrogenous bases are purines (adenine and guanine) and single ring nitrogenous bases are pyrimidines (thymine, cytosine and uracil in RNA instead of thymine).



Correct



Unattempted



Incorrect



5/5

Q : 5 carbon sugar in DNA is:



Ribose



Maltose



Fructose



Deoxyribose

## Explanation

DNA contain deoxyribose sugar while RNA contains ribose sugar.





## QUIZZES

### Practice Test 54



5 Questions



5 min

#### Topics

Double Helical Structure of DNA, DNA  
Replication (Models)

[Start Quiz](#)



1/5



5 min



Hint

Q : One complete turn of DNA molecule has \_\_\_\_\_ base pairs:



10



20



34



3.4



2/5



5 min



Hint

Q : Due to purine-pyrimidine base pairing, DNA has a constant diameter that is:



3.4 nm



0.34 nm



2 nm



20 nm





3/5



5 min



Hint

Q : The distance between two base pairs in a DNA molecule is:



2nm



3.4 nm



0.34nm



5 nm



4/5



5 min



Hint

Q : Sequence of original duplex is conserved, duplex itself is not. This is about:

A

Conservative model of DNA replication

B

Dispersive model of DNA replication

C

Semiconservative model of DNA replication

D

None of these



5/5



5 min



Hint

Q : During semi conservative DNA replication \_\_\_\_\_ is conserved.



Primary structure



Tertiary structure



Quaternary structure



Secondary structure



Correct



Unattempted



Incorrect



1/5

Q : One complete turn of DNA molecule has \_\_\_\_\_ base pairs:



10



20



34



3.4

## Explanation





Q : Due to purine-pyrimidine base pairing, DNA has a constant diameter that is:

A

3.4 nm

B

0.34 nm

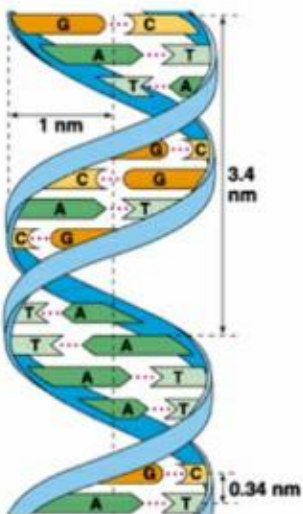
C

2 nm

D

20 nm

## Explanation





Q : The distance between two base pairs in a DNA molecule is:

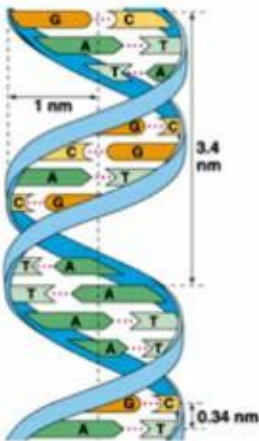
A 2nm

B 3.4 nm

C 0.34nm

D 5 nm

## Explanation





Incorrect



4/5

Q : Sequence of original duplex is conserved, duplex itself is not. This is about:

A

Conservative model of DNA replication

B

Dispersive model of DNA replication

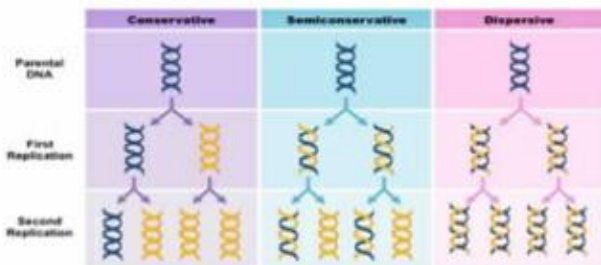
C

Semiconservative model of DNA replication

D

None of these

## Explanation







Incorrect



5/5

Q : During semi conservative DNA replication \_\_\_\_\_ is conserved.

A

Primary structure

B

Tertiary structure

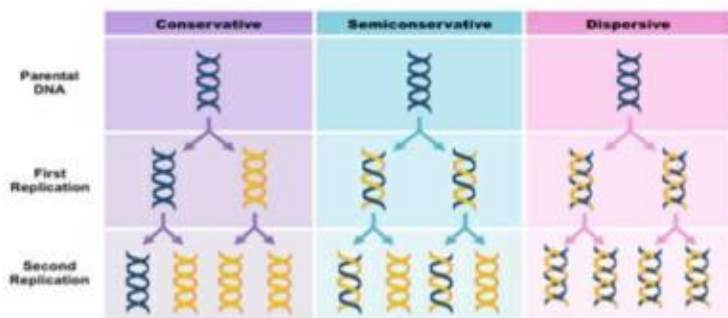
C

Quaternary structure

D

Secondary structure

## Explanation







## QUIZZES

### Practice Test 55



5 Questions



5 min

#### Topics

The Replication Process

[Start Quiz](#)



1/5



5 min



Hint

Q : DNA polymerase only adds nucleotides to:



5' – end



3' – end



2' – end



4' – end



2/5



5 min



Hint

Q : The correct sequence of enzymes used during replication of DNA is:

A

Helicase – ligase – DNA polymerase

B

DNA polymerase – ligase – helicase

C

Helicase – DNA polymerase – ligase

D

DNA polymerase – helicase – ligase



3/5



5 min



Hint

Q : Okazaki fragments are formed with the strand of DNA called:

A

Leading strand

B

Lagging strand

C

Both of these

D

Template strand



4/5



5 min



Hint

Q : The length of Okazaki segment in prokaryotes is:

A

100-200 Nucleotides

B

500 to 900 nucleotides

C

1000 to 2000 nucleotides

D

More than 2000 Nucleotides



5/5



5 min



Hint

Q : True replicating enzyme of E. coli is DNA polymerase:



I



II



III



IV



Correct



Unattempted



Incorrect



1/5

Q : DNA polymerase only adds nucleotides to:



5' – end



3' – end



2' – end



4' – end

## Explanation

DNA polymerase III can add nucleotides only to the 3' end of a DNA strand.



Correct



Unattempted



Incorrect



2/5

Q : The correct sequence of enzymes used during replication of DNA is:

A

Helicase – ligase – DNA polymerase

B

DNA polymerase – ligase – helicase

C

Helicase – DNA polymerase – ligase

D

DNA polymerase – helicase – ligase

## Explanation

The DNA replication begins at one or more sites on the DNA molecule, where there is a specific sequence of nucleotides, helicase help in unzipping of DNA molecule and DNA polymerase continue replication after addition of primer by primase. Okazaki fragments joined by ligase enzymes.





Correct



Unattempted



Incorrect



3/5

Q : Okazaki fragments are formed with the strand of DNA called:



Leading strand



Lagging strand



Both of these



Template strand

## Explanation

The lagging strand which elongates away from the replication fork, is synthesized discontinuously as a series of short segments called Okazaki fragments.



Correct



Unattempted



Incorrect



4/5

Q : The length of Okazaki segment in prokaryotes is:



100-200 Nucleotides



500 to 900 nucleotides



1000 to 2000 nucleotides



More than 2000 Nucleotides

## Explanation

Okazaki fragments are about 100 - 200 nucleotides long in eukaryotes and 1000 - 2000 nucleotides long in prokaryotes.





Correct



Unattempted



Incorrect



5/5

Q : True replicating enzyme of E. coli is DNA polymerase:



I



II



III



IV

### Explanation

DNA polymerase III is main replicating enzyme



## QUIZZES

### Practice Test 56



5 Questions



5 min

#### Topics

What is a Gene?, One Gene – One Polypeptide, How DNA Encodes Protein Structure?

[Start Quiz](#)



1/5



5 min



Hint

Q : If following substance is found in urine, then on oxidation with air it produces black urine:



Urea



Phenylalanine



Homogentisic acid



Sugar



2/5



5 min



Hint

Q : Which is a real cause of Alkaptonuria?

A

Homogentisic acid in urine

B

Absence of enzyme used for breakdown of homogentisic acid

C

Mutation in specific gene

D

Oxidation of urine.



3/5



5 min



Hint

Q : Enzymes are responsible for assembly of:

A

Nucleic acid

B

Protein

C

Carbohydrates

D

All A, B, C



4/5



5 min



Hint

Q : Molecular basis of sickle cell anemia was found by:

A

Beadle &amp; Tatum

B

F. Sanger

C

Friedrich Miescher

D

Vernon Ingram





5/5



5 min



Hint

Q : Soon after the work of Sanger it was revealed that all enzymes are strings of \_\_\_\_\_ arranged in a definite order.

A

Nucleotides

B

Amino acids

C

Nucleic acids

D

Monosaccharides



Correct



Unattempted



Incorrect



1/5

Q : If following substance is found in urine, then on oxidation with air it produces black urine:



Urea



Phenylalanine



Homogentisic acid



Sugar

## Explanation

In alkaptonuria the patients produced urine that contained homogentisic acid. This substance oxidized rapidly when exposed to air, turning the urine black. In normal individuals, homogentisic acid is broken down into simpler substances.



Correct



Unattempted



Incorrect



2/5

Q : Which is a real cause of Alkaptonuria?

A

Homogentisic acid in urine

B

Absence of enzyme used for breakdown of homogentisic acid

C

Mutation in specific gene

D

Oxidation of urine.

## Explanation

Patients suffering from alkaptonuria lacked the enzyme due to lack of true expression of gene.



Correct



Unattempted



Incorrect



3/5

Q : Enzymes are responsible for assembly of:



Nucleic acid



Protein



Carbohydrates



All A, B, C

## Explanation

Enzymes are responsible for catalyzing the synthesis of all protein, nucleic acids and carbohydrates.



Correct



Unattempted



Incorrect



4/5

Q : Molecular basis of sickle cell anemia was found by:

A

Beadle &amp; Tatum

B

F. Sanger

C

Friedrich Miescher

D

Vernon Ingram

## Explanation

Ingram, working at Cambridge University, showed that sickle cell anemia is caused by a change from glutamic acid to valine at position 6 of each Beta chain.





Correct



Unattempted



Incorrect



5/5

Q : Soon after the work of Sanger it was revealed that all enzymes are strings of \_\_\_\_\_ arranged in a definite order.

A

Nucleotides

B

Amino acids

C

Nucleic acids

D

Monosaccharides

## Explanation

Sanger's achievement was significant, as it was demonstrated for the first time that proteins consisted of definable sequences of amino acids.



## QUIZZES

### Practice Test 57



5 Questions



5 min

#### Topics

Cells Use RNA to Make Proteins, Transcription,  
Genetic Code

[Start Quiz](#)





1/5



5 min



Hint

Q : The copying of mRNA from DNA is called:

A

Translation

B

Transduction

C

Transformation

D

Transcription





2/5



5 min



Hint

Q : Second step of central dogma is:



Replication



Transcription



Translation



Reverse transcription



3/5



5 min



Hint

Q : In prokaryotes, TATAAT binding site is:

A

-10 sequence

B

-25 sequence

C

-35 sequence

D

-70 sequence



4/5



5 min



Hint

Q : Which of the following is a site for attachment of amino acid on tRNA?

A

5'-ACC-3'

B

5'-ACA-3'

C

5'-CCA-3'

D

3'-ACC-5'



5/5



5 min



Hint

Q : Which one of the following is initiation codon?



AUG



GUA



UGA



GAC



Incorrect



1/5

Q : The copying of mRNA from DNA is called:

A

Translation

B

Transduction

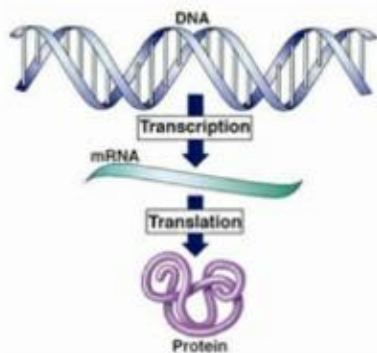
C

Transformation

D

Transcription

## Explanation



1

2

3

4

5





Incorrect



2/5

Q : Second step of central dogma is:

A

Replication

B

Transcription

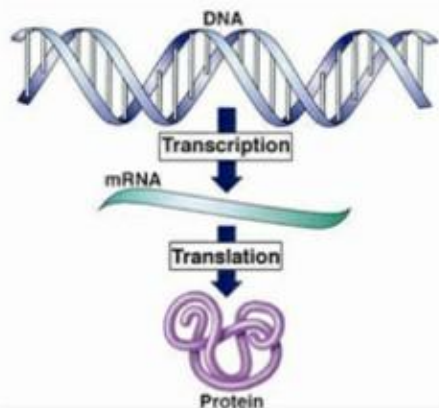
C

Translation

D

Reverse transcription

## Explanation



1

2

3

4

5





Correct



Unattempted



Incorrect



3/5

Q : In prokaryotes, TATAAT binding site is:



-10 sequence



-25 sequence

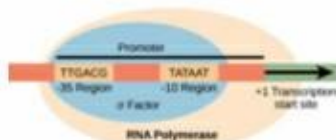


-35 sequence



-70 sequence

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Which of the following is a site for attachment of amino acid on tRNA?

A

5'-ACC-3'

B

5'-ACA-3'

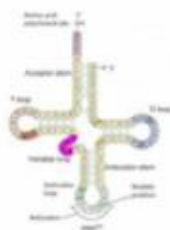
C

5'-CCA-3'

D

3'-ACC-5'

## Explanation







Correct



Unattempted



Incorrect



5/5

Q : Which one of the following is initiation codon?



AUG



GUA



UGA



GAC

## Explanation

Every gene starts with initiation codon AUG, which encodes the amino acid methionine.



## QUIZZES

### Practice Test 58



5 Questions



5 min

Topics

Translation

[Start Quiz](#)



1/5



5 min



Hint

Q : Every gene starts with codon AUG which normally encodes:



Arginine



Lysine



Methionine



Tryptophan



2/5



5 min



Hint

Q : Codon is present on:

A

Messenger RNA

B

Transfer RNA

C

Ribosomal RNA

D

DNA



3/5



5 min



Hint

Q : Anticodon is present on:



Messenger RNA



Transfer RNA



Ribosomal RNA



Both A and B



4/5



5 min



Hint

Q : Nonsense codons are recognized by:



RNA



rRNA



Release factor



Initiation complex



5/5



5 min



Hint

Q : There are \_\_\_\_\_ different types of aminoacyl-tRNA synthetase.



20



25



45



61



Correct



Unattempted



Incorrect



1/5

Q : Every gene starts with codon AUG which normally encodes:



Arginine



Lysine



Methionine



Tryptophan

## Explanation

Every gene starts with initiation codon AUG, which encodes the amino acid methionine.





Correct



Unattempted



Incorrect



2/5

Q : Codon is present on:



Messenger RNA



Transfer RNA

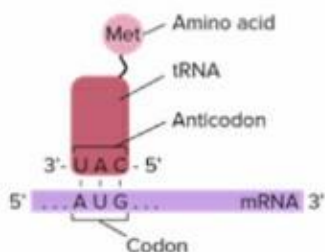


Ribosomal RNA



DNA

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : Anticodon is present on:

A

Messenger RNA

B

Transfer RNA

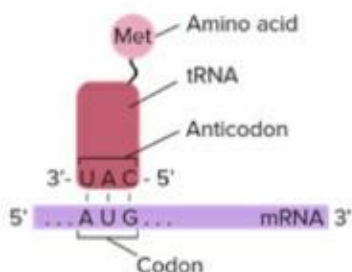
C

Ribosomal RNA

D

Both A and B

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Nonsense codons are recognized by:



RNA



rRNA



Release factor



Initiation complex

## Explanation

Nonsense codons do not bind to tRNA, but they are recognized by release factors, proteins that release the newly made polypeptide from the ribosomes.



Correct



Unattempted



Incorrect



5/5

Q : There are \_\_\_\_\_ different types of aminoacyl-tRNA synthetase.



20



25



45



61

## Explanation

tRNA molecules become attached to specific amino acids through the action of activating enzymes called aminoacyl-tRNA synthetase, one of which exists for each of the 20 common amino acids.



## QUIZZES

### Practice Test 59



5 Questions



5 min

Topics

Mutations

[Start Quiz](#)



1/5



5 min



Hint

Q : The ultimate source of all changes is:



Mutation



Evolution



Migration



Genetic drift



2/5



5 min



Hint

Q : This condition appears as a result of point mutation:



Down's syndrome



Turner's syndrome



Klinefelter's syndrome



Sickle cell anemia



3/5



5 min



Hint

Q : Phenylketonuria is because of defective enzyme:

A

Hemoglobin

B

Phenylalanine hydroxylase

C

Anhydroxylase

D

Lipase





4/5



5 min



Hint

Q : Example of point mutation is:

A

Down's syndrome

B

Sickle cell anemia

C

Phenylketonuria

D

Both B and C



5/5



5 min



Hint

Q : Mutation causing agent is called:



Mutant



Mutagen



Wild



Mutated



Correct



Unattempted



Incorrect



1/5

Q : The ultimate source of all changes is:



Mutation



Evolution



Migration



Genetic drift

## Explanation

The mutation in germ line cell is passed to subsequent generations thus providing the raw material from which natural selection produces evolutionary change.





Correct



Unattempted



Incorrect



2/5

Q : This condition appears as a result of point mutation:



Down's syndrome



Turner's syndrome



Klinefelter's syndrome



Sickle cell anemia

## Explanation

Sickle cell anemia and phenylketonuria are well known examples of point mutation.



Correct



Unattempted



Incorrect



3/5

Q : Phenylketonuria is because of defective enzyme:



Hemoglobin



Phenylalanine hydroxylase



Anhydroxylase



Lipase

## Explanation

In phenylketonuria, phenylalanine is not degraded because of defective enzyme phenylalanine hydroxylase.





Correct



Unattempted



Incorrect



4/5

Q : Example of point mutation is:



Down's syndrome



Sickle cell anemia



Phenylketonuria



Both B and C

## Explanation

Sickle cell anemia and phenylketonuria are well known examples of point mutation.





Correct



Unattempted



Incorrect



5/5

Q : Mutation causing agent is called:



Mutant



Mutagen



Wild



Mutated

## Explanation

Mutagens are responsible for mutation.



## QUIZZES

### Practice Test 60



2 Questions



5 min

#### Topics

Introduction of Cell Cycle

[Start Quiz](#)





1/2



5 min



Hint

Q : Cell cycle consists of two phases:

A

Karyokinesis and cytokinesis

B

Interphase and mitotic phase

C

Interphase and karyokinesis

D

Mitotic phase and cytokinesis



2/2



5 min



Hint

Q : Cell cycle is divided into how many major phases?



2



3



4



5



Correct



Unattempted



Incorrect



1/2

Q : Cell cycle consists of two phases:

A

Karyokinesis and cytokinesis

B

Interphase and mitotic phase

C

Interphase and karyokinesis

D

Mitotic phase and cytokinesis

## Explanation

The cell undergoes sequence of changes called cell cycle, which involves two phases interphase (period of non-apparent division) and mitotic phase (period of division).



Incorrect



2/2

Q : Cell cycle is divided into how many major phases?

A

2

B

3

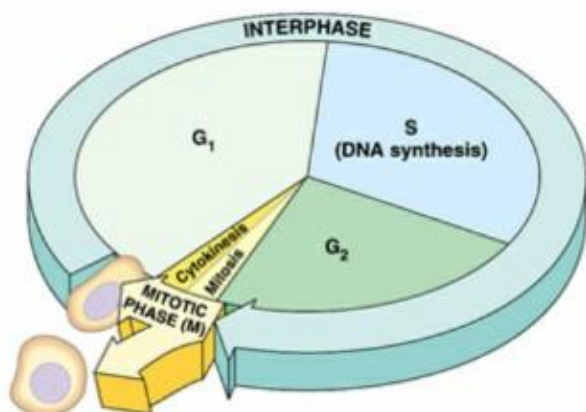
C

4

D

5

## Explanation





## QUIZZES

### Practice Test 61



5 Questions



5 min

Topics

Interphase

[Start Quiz](#)



1/5



5 min



Hint

Q : Nerve cells and eye lens cells remain in \_\_\_\_\_ stage for life time.

 $G_1$  $G_2$  $G_0$ 

S



2/5



5 min



Hint

Q : Which one of the following event is included in cell cycle?

A

Growth

B

Replication of DNA

C

Cell division

D

All of the above



3/5



5 min



Hint

Q : What is the time period for mitosis in an average cell cycle in the case of human cell?



24 Hours



9 Hours



30 Minutes



90 Minutes





4/5



5 min



Hint

Q : Which one is not the event of G<sub>2</sub> phase?

A

Energy storage for chromosome movement

B

Synthesis of microtubules subunits

C

Doubling of chromosome

D

Synthesis of mitotic specific proteins



5/5



5 min



Hint

Q : Period of non-apparent division is called:

A

Cell cycle

B

Interphase

C

Mitotic phase

D

Meiosis



Correct



Unattempted



Incorrect



1/5

Q : Nerve cells and eye lens cells remain in \_\_\_\_\_ stage for life time.

 $G_1$  $G_2$  $G_0$ 

S

## Explanation

The  $G_0$  phase is a period in the cell cycle in which cells exist in a quiescent state. It is sometimes referred to as a "post-mitotic" state. Cells in  $G_0$  are in a non-dividing phase outside of the cell cycle.



Correct



Unattempted



Incorrect



2/5

Q : Which one of the following event is included in cell cycle?



Growth



Replication of DNA



Cell division



All of the above

## Explanation

The cell cycle is a four-stage process in which the cell increases in size, copies its DNA, prepares to divide and finally divides.



Correct



Unattempted



Incorrect



3/5

Q : What is the time period for mitosis in an average cell cycle in the case of human cell?

A

24 Hours

B

9 Hours

C

30 Minutes

D

90 Minutes

## Explanation

In human cell,  $G_1$  takes 9 hours, S-phase takes 10 hours, and  $G_2$  takes 4.5 hours and M phase takes 30 minutes to complete division. So, the total time to complete cell cycle is about 24 hours.



Incorrect



4/5

Q : Which one is not the event of  $G_2$  phase?

A

Energy storage for chromosome movement

B

Synthesis of microtubules subunits

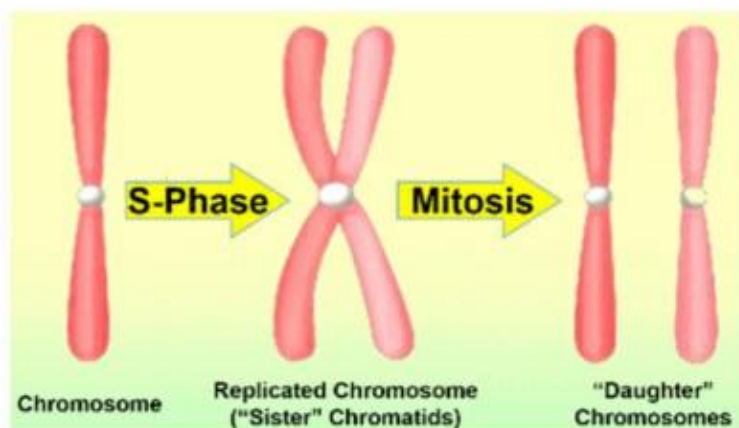
C

Doubling of chromosome

D

Synthesis of mitotic specific proteins

## Explanation





Correct



Unattempted



Incorrect



5/5

Q : Period of non-apparent division is called:



Cell cycle



Interphase



Mitotic phase



Meiosis

## Explanation

Interphase is a non-dividing phase in which cell metabolically active and copies its DNA in preparation for mitosis.





## QUIZZES

### Practice Test 62



5 Questions



5 min

Topics

Mitosis

[Start Quiz](#)





1/5



5 min



Hint

Q : Mitosis is divided into:

A

Karyokinesis

B

Cytokinesis

C

Interphase

D

Both A &amp; B



2/5



5 min



Hint

Q : Phragmoplast is formed by vesicles originated from:

A

Endoplasmic reticulum

B

Golgi complex

C

Chloroplast

D

Mitochondria



3/5



5 min



Hint

Q : Karyokinesis involves division of nucleus and cytokinesis refers to:

A

Division of whole cell

B

Division of cytoplasm

C

Division of centromere

D

Division of cell wall



4/5



5 min



Hint

Q : Equal distribution of chromatids in daughter cells is ensured during:

A

Metaphase

B

Anaphase

C

Prophase

D

Interphase



5/5



5 min



Hint

Q : During anaphase:

A

Kinetochore &amp; polar fibers contract

B

Kinetochore &amp; polar fibers elongate

C

Kinetochore fibers contract &amp; polar fibers elongate

D

Kinetochore fibers elongate &amp; polar fibers contract



Correct



Unattempted



Incorrect



1/5

Q : Mitosis is divided into:



Karyokinesis



Cytokinesis



Interphase



Both A &amp; B

## Explanation

Interphase is a non-dividing phase where all preparations of cell division takes place. Karyokinesis and cytokinesis are steps of mitotic phase (period of division).

Q : Phragmoplast is formed by vesicles originated from:

A

Endoplasmic reticulum

B

Golgi complex

C

Chloroplast

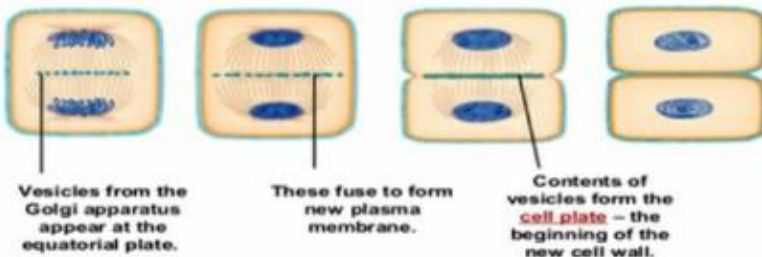
D

Mitochondria

## Explanation

### Cytokinesis: Plant Cells

#### Cell Plate Formation



Q : Karyokinesis involves division of nucleus and cytokinesis refers to:

A

Division of whole cell

B

Division of cytoplasm

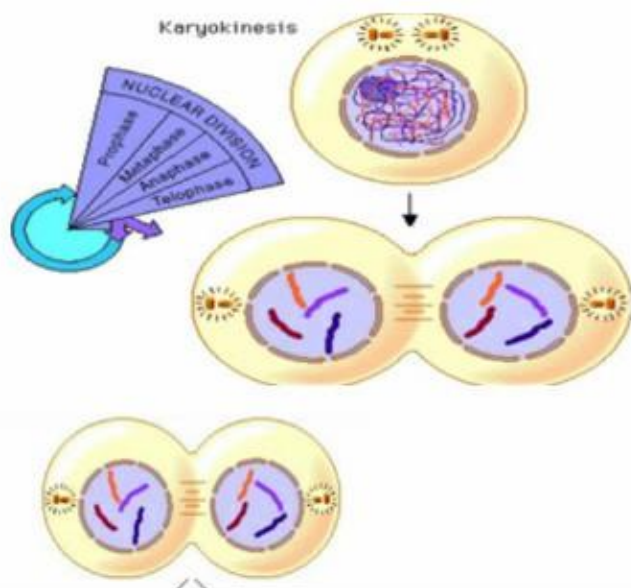
C

Division of centromere

D

Division of cell wall

## Explanation





B

Division of cytoplasm

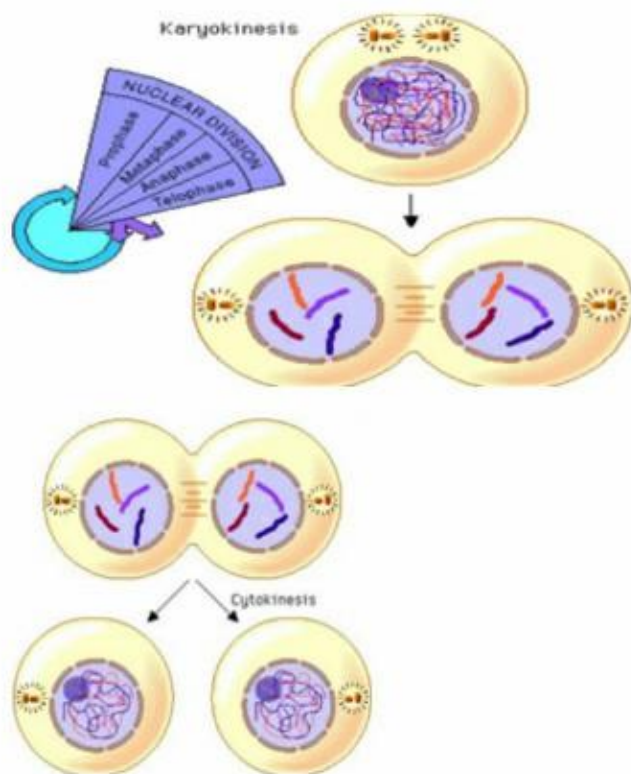
C

Division of centromere

D

Division of cell wall

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Equal distribution of chromatids in daughter cells is ensured during:

A

Metaphase

B

Anaphase

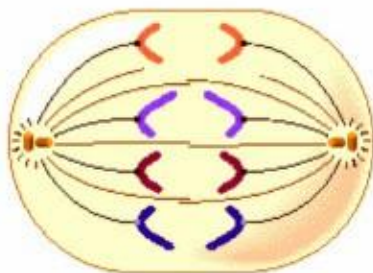
C

Prophase

D

Interphase

## Explanation



### Anaphase

The chromosomes have separated and are moving toward the poles.



Incorrect



5/5

Q : During anaphase:

A

Kinetochore &amp; polar fibers contract

B

Kinetochore &amp; polar fibers elongate

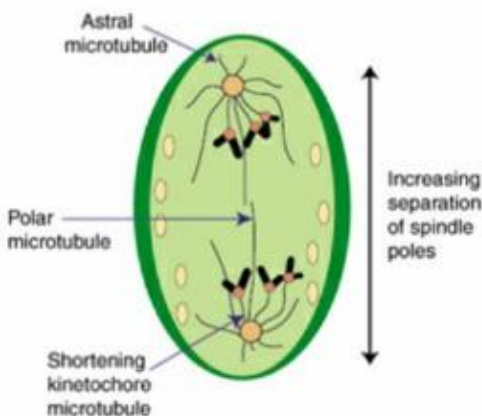
C

Kinetochore fibers contract &amp; polar fibers elongate

D

Kinetochore fibers elongate &amp; polar fibers contract

## Explanation





## QUIZZES

### Practice Test 63



4 Questions



5 min

Topics

Importance of Mitosis

[Start Quiz](#)



1/4



5 min



Hint

Q : Tissue culture and cloning seek help through:

A

Mitosis

B

Endo-mitosis

C

Meiosis

D

Karyokinesis



2/4



5 min



Hint

Q : Healing of wound and repairing of tissues depends on:

A

Mitosis

B

Meiosis

C

Amitosis

D

Mutation



3/4



5 min



Hint

Q : Mitosis is preferable over meiosis because:

A

It produces differences among organisms

B

It is important in growth of organisms

C

It occurs in diploid cells only

D

It is important for process of evolution



4/4



5 min



Hint

Q : Which of the following is not related to mitosis?

A

Cancer

B

Growth

C

Cloning

D

Binary fission





Correct



Unattempted



Incorrect



1/4

Q : Tissue culture and cloning seek help through:



Mitosis



Endo-mitosis



Meiosis



Karyokinesis

## Explanation

In mitosis, genetic information remains unchanged and continuity of similar information is ensured. In tissue culturing and cloning same genetic information is cloned that is why mitosis is important here.



Correct



Unattempted



Incorrect



2/4

Q : Healing of wound and repairing of tissues depends on:



Mitosis



Meiosis



Amitosis



Mutation

## Explanation

In mitosis, genetic information remains unchanged and continuity of similar information is ensured from parents to daughter cell. Regeneration, healing of wounds and replacement of older cells depend upon mitosis.



Correct



Unattempted



Incorrect



3/4

Q : Mitosis is preferable over meiosis because:



A It produces differences among organisms



B It is important in growth of organisms



C It occurs in diploid cells only



D It is important for process of evolution

## Explanation

In mitosis, genetic information remains unchanged and continuity of similar information is ensured from parents to daughter cell. Regeneration, healing of wounds, development and growth depend upon mitosis.



Correct



Unattempted



Incorrect



4/4

Q : Which of the following is not related to mitosis?



Cancer



Growth



Cloning



Binary fission

## Explanation

Controlled mitosis helps in development and growth of cells, regeneration and replacement of older cells, tissue culture and cloning. But if it becomes uncontrolled by any means it may result malfunction, unwanted tumors and cancer.



## QUIZZES

### Practice Test 64



5 Questions



5 min

#### Topics

Cancer (Uncontrolled Cell Division)

[Start Quiz](#)



1/5



5 min



Hint

**Q : The spread of tumor cells and establishment of secondary areas of growth is called:**



Epistasis



Prostatitis



Angiogenesis



Metastasis



2/5



5 min



Hint

Q : Cancer occurs due to error in:

A

Mitosis

B

Meiosis

C

Binary fission

D

Budding





3/5



5 min



Hint

Q : Cancer is caused mainly by mutation in:

A

Somatic cells

B

Malignant cells

C

Sex cells

D

Reproductive cells





4/5



5 min



Hint

Q : How many mutations may occur in genes that regulate the cell division to cause the cancer?



1-2



3-20



21-30



31-40



5/5



5 min



Hint

Q : What are the restrictions on cell movements due to metastatic cells?

A

Basal lamina

B

Physical barriers

C

Both A and B

D

None of these

Q : The spread of tumor cells and establishment of secondary areas of growth is called:

A

Epistasis

B

Prostatitis

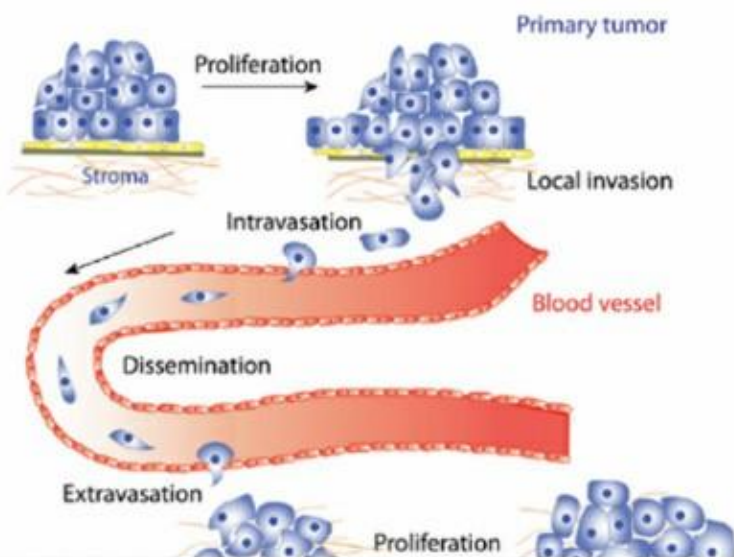
C

Angiogenesis

D

Metastasis

## Explanation



A

Epistasis

B

Prostatitis

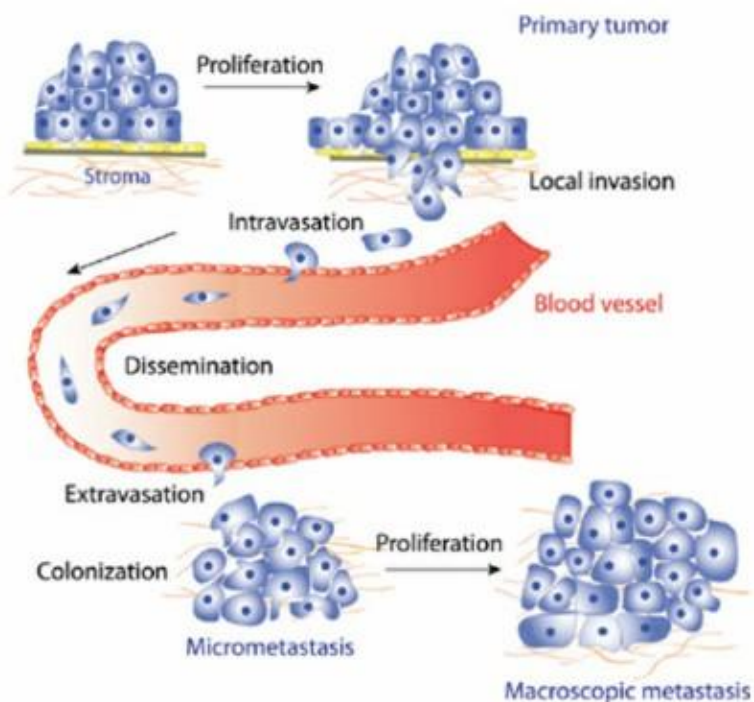
C

Angiogenesis

D

Metastasis

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Cancer occurs due to error in:



Mitosis



Meiosis



Binary fission



Budding

## Explanation

Controlled mitosis helps in development and growth of cells, regeneration and replacement of older cells. But if it becomes uncontrolled by any means it may result malfunction, unwanted tumors and cancer.





Correct



Unattempted



Incorrect



3/5

Q : Cancer is caused mainly by mutation in:



Somatic cells



Malignant cells



Sex cells



Reproductive cells

## Explanation

The transformation of a normal cell into a cancerous cell takes place through a sequence of a small number of discrete genetic events, somatic mutations. Thus, cancer can be regarded properly as a genetic disease of somatic cells.







Correct



Unattempted



Incorrect



4/5

Q : How many mutations may occur in genes that regulate the cell division to cause the cancer?

A

1-2

B

3-20

C

21-30

D

31-40

## Explanation

Cancer results from the accumulation of as few as 3 to 20 mutations, in genes. Due to this contact of metastatic cells with normal cells is finished and by invading other body parts they proliferate unlimitedly.



Correct



Unattempted



Incorrect



5/5

Q : What are the restrictions on cell movements due to metastatic cells?



Basal lamina



Physical barriers



Both A and B



None of these

## Explanation

After mutation, metastatic cells break their contact with normal cells and overcome the restrictions on cell movement provided by basal lamina and other physical barriers so that they can invade other body parts.





## QUIZZES

### Practice Test 65



5 Questions



5 min

Topics

Meiosis

[Start Quiz](#)



1/5



5 min



Hint

Q : The prophase stage in which the chromosomes become visible, shorten and thick:

A

Leptotene

B

Zygotene

C

Pachytene

D

Diplotene



2/5



5 min



Hint

Q : Pairing of homologous chromosomes for tetrad formation starts at:

A

Zygotene

B

Leptotene

C

Pachytene

D

Epistasis



3/5



5 min



Hint

Q : The actual reduction division is:



Meiosis I



Meiosis II



Mitosis



Cytokinesis



4/5



5 min



Hint

Q : During Meiosis, homologous chromosomes pair with each other, this occurs in:

A

Leptotene

B

Zygotene

C

Pachytene

D

Diplotene



5/5



5 min



Hint

Q : After zygotene, homologous chromosomes are:

A

Paired &amp; fused

B

Neither paired nor fused

C

Not paired but fused

D

Paired but not fused



Correct



Unattempted



Incorrect



1/5

Q : The prophase stage in which the chromosomes become visible, shorten and thick:



Leptotene



Zygotene



Pachytene



Diplotene

## Explanation

Leptotene is the first stage of prophase-I in which chromosomes become visible, shorten and thick. The size of nucleus increases and homologous chromosomes start getting closer to each other.



Correct



Unattempted



Incorrect



2/5

Q : Pairing of homologous chromosomes for tetrad formation starts at:



Zygotene



Leptotene



Pachytene



Epistasis

## Explanation

Pairing of homologous chromosomes is called synapsis that starts in zygotene.





Correct



Unattempted



Incorrect



3/5

Q : The actual reduction division is:



Meiosis I



Meiosis II



Mitosis



Cytokinesis

## Explanation

Crossing over and re-shuffling of genes occurs in meiosis I. Meiosis II is just like mitosis and cytokinesis is the division of whole cell that occurs both in meiosis and mitosis.



Correct



Unattempted



Incorrect



4/5

Q : During Meiosis, homologous chromosomes pair with each other, this occurs in:



Leptotene



Zygotene



Pachytene



Diplotene

## Explanation

In leptotene, homologous chromosomes get close to each other and their pairing starts in zygotene which is called synapsis.



Correct



Unattempted



Incorrect



5/5

Q : After zygotene, homologous chromosomes are:



Paired &amp; fused



Neither paired nor fused



Not paired but fused



Paired but not fused

## Explanation

After synapsis, each paired but not fused homologous chromosome is called bivalent or tetrad and this occurs in zygotene.



## QUIZZES

### Practice Test 66



2 Questions



5 min

Topics

Importance of Meiosis

[Start Quiz](#)



1/2



5 min



Hint

Q : Meiosis generally takes place in plants during formation of:

A

Gametes

B

Spores

C

Zygote

D

Embryo



2/2



5 min



Hint

Q : Crossing over produces genetic variations necessary for:

A

Mutation

B

Abnormalities

C

Evolution

D

Non- disjunction



Correct



Unattempted



Incorrect



1/2

Q : Meiosis generally takes place in plants during formation of:



Gametes



Spores



Zygote



Embryo

## Explanation

Meiosis takes place in plants during sporogenesis (spore formation).



Correct



Unattempted



Incorrect



2/2

Q : Crossing over produces genetic variations necessary for:



Mutation



Abnormalities



Evolution



Non- disjunction

## Explanation

Crossing over cause variations and modifications in the genome which is bases of evolution and make every individual specific, particular and unique in his characteristics.





## QUIZZES

### Practice Test 67



5 Questions



5 min

#### Topics

Meiotic Errors (Non-Disjunction)

[Start Quiz](#)



1/5



5 min



Hint

Q : In Non-Disjunction, chromosomes fail to segregate during:



Prophase



Metaphase



Anaphase



Interphase



2/5



5 min



Hint

Q : The syndrome in which individual has short stature, webbed neck , without ovaries and complete absence of germ cells is:



Mongolism



Klinefelter's syndrome



Down's syndrome



Turner's syndrome



3/5



5 min



Hint

Q : The pattern of sex chromosomes in Jacob's syndrome:



XYY



XXX



XXY



X0



4/5



5 min



Hint

Q : Which one of the following is due autosomal non-disjunction?

A

Down's syndrome

B

Jacobs Syndrome

C

Klinefelter's syndrome

D

All of these



5/5



5 min



Hint

Q : The autosomal non-disjunction in man in which 21<sup>st</sup> pair of chromosomes fail to segregate, resulting in gamete with 24 chromosomes is called:

A

Down's syndrome

B

Turner's syndrome

C

Klinefelter's syndrome

D

Jacob's syndrome



Q : In Non-Disjunction, chromosomes fail to segregate during:

A

Prophase

B

Metaphase

C

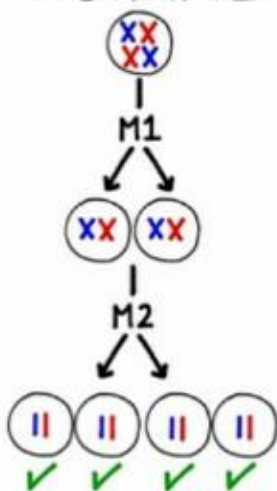
Anaphase

D

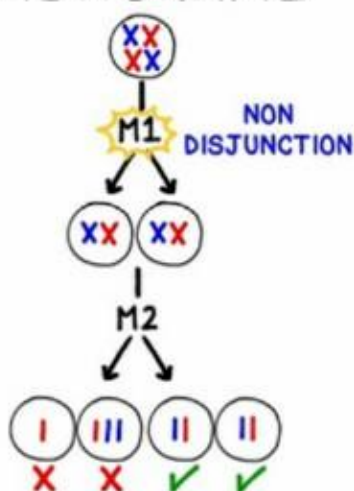
Interphase

## Explanation

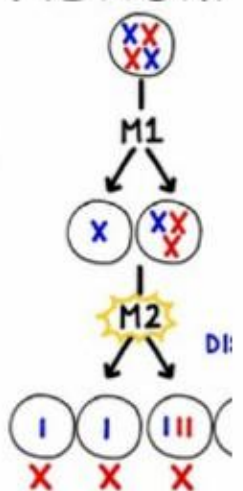
### NORMAL



### ABNORMAL



### ABNORMAL





Correct



Unattempted



Incorrect



2/5

Q : The syndrome in which individual has short stature, webbed neck , without ovaries and complete absence of germ cells is:



Mongolism



Klinefelter's syndrome



Down's syndrome



Turner's syndrome

## Explanation

qIndividual suffering from Turner's syndrome has female appearance with short stature, webbed neck, without ovaries and complete absence of germ cells.





Correct



Unattempted



Incorrect



3/5

Q : The pattern of sex chromosomes in Jacob's syndrome:



XYY



XXX



XXY



X0

## Explanation

XYY is Jacob's syndrome, XXX is Meta-female syndrome, X0 is Turner's syndrome and Klinefelter's syndrome is XXY.



Correct



Unattempted



Incorrect



4/5

Q : Which one of the following is due autosomal non-disjunction?



Down's syndrome



Jacobs Syndrome



Klinefelter's syndrome



All of these

## Explanation

Down syndrome is due to non-disjunction of autosomal chromosome number 21<sup>st</sup>, while Jacobs syndrome and klinefelter syndrome is due to non-disjunction of sex chromosome.



Correct



Unattempted



Incorrect



5/5

**Q : The autosomal non-disjunction in man in which 21<sup>st</sup> pair of chromosomes fail to segregate, resulting in gamete with 24 chromosomes is called:**



Down's syndrome



Turner's syndrome



Klinefelter's syndrome



Jacob's syndrome

## Explanation

Down's syndrome is an autosomal non-disjunction that appears to occur in the ova and is related to the age of the mother. It may occur in other than 21<sup>st</sup> chromosome which usually results in abortion or death in early age.



## QUIZZES

### Practice Test 68



5 Questions



5 min

#### Topics

Necrosis & Apoptosis

[Start Quiz](#)



1/5



5 min



Hint

Q : Apoptosis is:

A

Division of cells

B

Death of cells by tissue damage

C

Suicide of cells

D

Weakness of cells



2/5



5 min



Hint

Q : Programmed and organized death of cell is also known as:

A

Necrosis

B

Apoptosis

C

Cyclosis

D

Chlorosis



3/5



5 min



Hint

Q : Cell death due to tissue damage is called:

A

Apoptosis

B

Metastasis

C

Necrosis

D

Suicide



4/5



5 min



Hint

Q : Intracellular contents are released during which type of cell death?



Necrosis



Apoptosis



Autophagy



None of these





5/5



5 min



Hint

Q : Apoptotic bodies:

A

Get dissolved

B

Enlarge and burst

C

Ingested by phagocytes

D

Remain intact

Q : Apoptosis is:

A

Division of cells

B

Death of cells by tissue damage

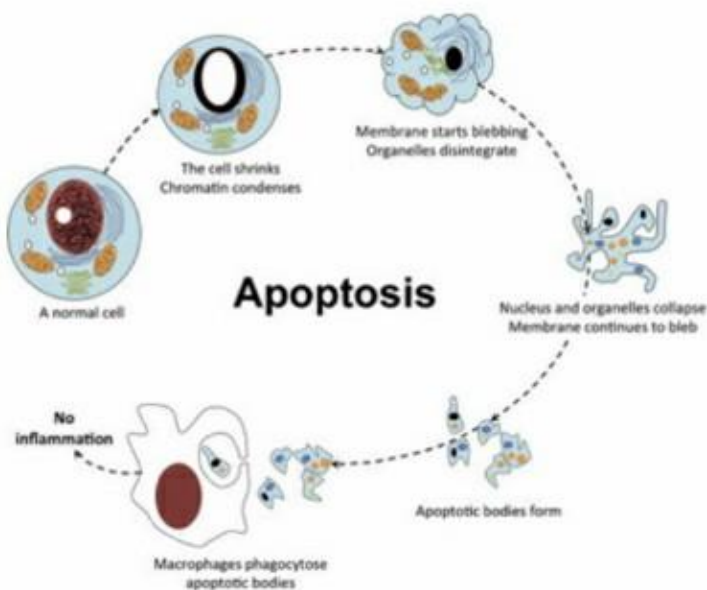
C

Suicide of cells

D

Weakness of cells

## Explanation



Q : Programmed and organized death of cell is also known as:

A

Necrosis

B

Apoptosis

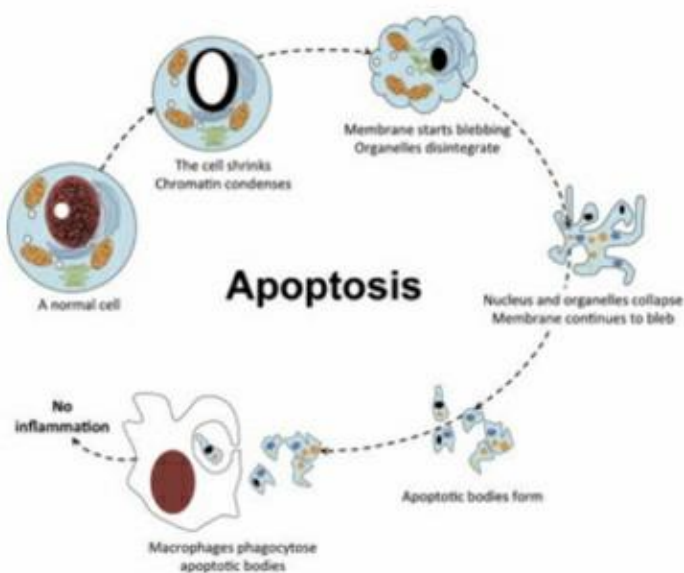
C

Cyclosis

D

Chlorosis

## Explanation





Correct



Unattempted



Incorrect



3/5

Q : Cell death due to tissue damage is called:

A

Apoptosis

B

Metastasis

C

Necrosis

D

Suicide

## Explanation

Programmed cell death and suicide of cells occurs in apoptosis. Spread of tumor cells and establishment of secondary growth areas is called metastasis.

Q : Intracellular contents are released during which type of cell death?

A

Necrosis

B

Apoptosis

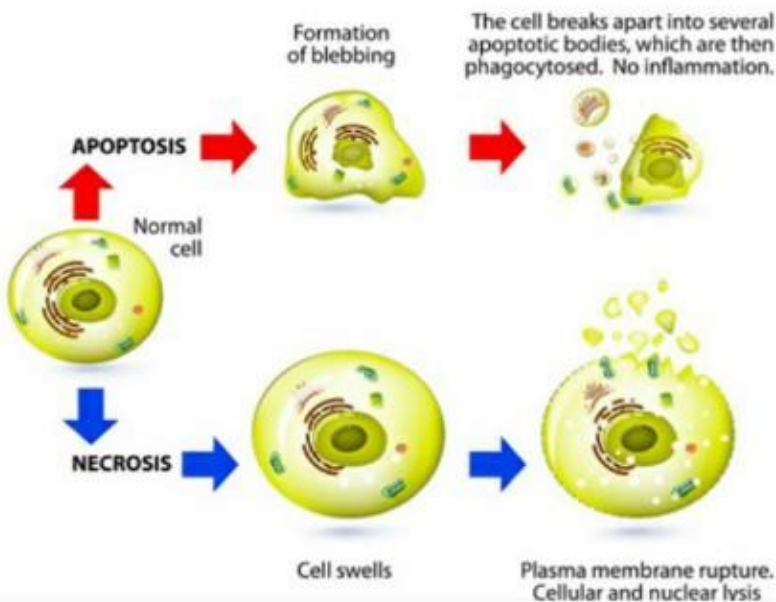
C

Autophagy

D

None of these

## Explanation



Q : Apoptotic bodies:

A

Get dissolved

B

Enlarge and burst

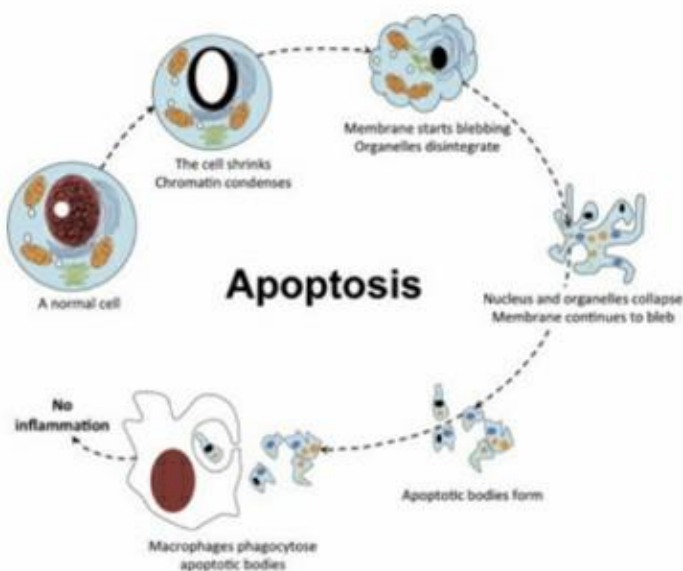
C

Ingested by phagocytes

D

Remain intact

## Explanation





## QUIZZES

### Practice Test 69



5 Questions



5 min

#### Topics

Genes, Alleles and Gene Pool

[Start Quiz](#)





1/5



5 min



Hint

Q : All the genes found in a breeding population constitute:



Genotype



Genome



Gene frequency



Gene pool





2/5



5 min



Hint

Q : The position of a gene on the chromosome is called its \_\_\_\_\_.

A

Allele

B

Phenotype

C

Locus

D

Genotype



3/5



5 min



Hint

Q : Point out the structure that is responsible for the transmission of hereditary characteristics from the parents to the offspring:

A

Alleles

B

Genes

C

DNA

D

All of the above



4/5



5 min



Hint

Q : Genes keep on hopping on different loci:

A

Polygene

B

Multiple allele

C

Jumping gene

D

SRY



5/5



5 min



Hint

Q : What is false for genes?

A

Basic unit for biological information

B

The position of gene on the chromosome is called locus

C

Always composed of two alleles

D

Gene is the part of DNA having specific sequence



Correct



Unattempted



Incorrect



1/5

Q : All the genes found in a breeding population constitute:



Genotype



Genome



Gene frequency



Gene pool

## Explanation

Genome is the collection of all genes in an individual, while genotype is the combination of genes. Gene frequency is the relative frequency of an [allele](#) (variant of a [gene](#)) at a particular [locus](#) in a [population](#), expressed as a fraction or percentage.





Correct



Unattempted



Incorrect



2/5

Q : The position of a gene on the chromosome is called its \_\_\_\_\_.



Allele



Phenotype



Locus



Genotype

## Explanation

Allele is an alternate form of a gene. Locus is the position of gene. Human is a diploid organism with two alleles at each genetic locus.



Correct



Unattempted



Incorrect



3/5

Q : Point out the structure that is responsible for the transmission of hereditary characteristics from the parents to the offspring:



Alleles



Genes



DNA



All of the above

## Explanation

Genes are specific sequence of nucleotides in DNA present on chromosomes and alleles are partner of gene pair on same locus.





Correct



Unattempted



Incorrect



4/5

Q : Genes keep on hopping on different loci:



Polygene



Multiple allele



Jumping gene



SRY

## Explanation

A gene whose individual effect on a phenotype is too small to be observed, but which can act together with others to produce observable variation called polygene. Multiple alleles are more than two alternate forms of a gene produce by mutation.





Correct



Unattempted



Incorrect



5/5

Q : What is false for genes?

A

Basic unit for biological information

B

The position of gene on the chromosome is called locus

C

Always composed of two alleles

D

Gene is the part of DNA having specific sequence

## Explanation

Some genes are non-allelic e.g. in males' genes present on X or Y chromosomes are non-allelic.



## QUIZZES

### Practice Test 70



5 Questions



5 min

#### Topics

Mendel's Laws of Inheritance, Law of Segregation

[Start Quiz](#)



1/5



5 min



Hint

Q : Name biologist who renamed the elementen as gene:



Mendel



Morgan



Johannsen



W.S. Sutton



2/5



5 min



Hint

Q : Number of alleles for seed colour in pea plant is/are:



1



2



3



More than 3



3/5



5 min



Hint

Q : Which of these is a recessive trait in pea plant?

A

Purple flower

B

Green pod

C

Terminal flower

D

Inflated pod



4/5



5 min



Hint

Q : What will be ratio of two alleles (R & r) in a population having the phenotypic expression as 3:1?



3:1



2:1



1:1



1:3



5/5



5 min



Hint

Q : Law of segregation was based on:

A

Monohybrid cross

B

Dihybrid cross

C

Both monohybrid and dihybrid

D

None of these



Correct



Unattempted



Incorrect



1/5

Q : Name biologist who renamed the elementen as gene:



Mendel



Morgan



Johannsen



W.S. Sutton

## Explanation

Mended called particular hereditary factors as elementen and Johannsen renamed these factors as 'gene'.







Correct



Unattempted



Incorrect



2/5

Q : Number of alleles for seed colour in pea plant is/are:



1



2



3



More than 3

Explanation



Correct



Unattempted



Incorrect



3/5

Q : Which of these is a recessive trait in pea plant?



Purple flower



Green pod



Terminal flower



Inflated pod

## Explanation

Axial flower position is dominant while terminal flower position is recessive trait.



Correct



Unattempted



Incorrect



4/5

Q : What will be ratio of two alleles (R & r) in a population having the phenotypic expression as 3:1?



3:1



2:1



1:1



1:3

### Explanation

Genotypic ratio. 1:2:1

RR, Rr, Rr, rr

4R:4r

1:1





Correct



Unattempted



Incorrect



5/5

Q : Law of segregation was based on:



Monohybrid cross



Dihybrid cross



Both monohybrid and dihybrid



None of these

## Explanation

Law of segregation was based on monohybrid cross while law of independent assortment was based on dihybrid cross.





## QUIZZES

### Practice Test 71



5 Questions



5 min

#### Topics

Test Cross, Law of Independent Assortment  
(Dihybrid Cross), Probability and Product  
Rule

[Start Quiz](#)



1/5



5 min



Hint

Q : The cross which is used to find out the homozygous or heterozygous nature of the genotype is called:

A

Test cross

B

Reciprocal cross

C

Monohybrid cross

D

Dihybrid cross



2/5



5 min



Hint

Q : If the result of test cross is 50% or 1:1, the dominant individual should be:



Homozygous



Heterozygous



Homozygous recessive



Incompletely dominant



3/5



5 min



Hint

Q : The genes for pod colour and flower colour are located on the:

A

Same chromosome

B

Two chromosomes of the homologues pair

C

Two chromosomes of non-homologous pairs

D

Two different sister chromatids





4/5



5 min



Hint

Q : A pea plant producing four types of gametes must have the genotype as:



RRYY



RrYY



rrYy



RrYy



5/5



5 min



Hint

Q : Chance of an event to occur is called:

A

Recombination

B

Probability

C

Product rule

D

Allele frequency



Correct



Unattempted



Incorrect



1/5

Q : The cross which is used to find out the homozygous or heterozygous nature of the genotype is called:



Test cross



Reciprocal cross



Monohybrid cross



Dihybrid cross

## Explanation

Test cross is used to check the genotype of dominant phenotype.



Correct



Unattempted



Incorrect



2/5

Q : If the result of test cross is 50% or 1:1, the dominant individual should be:



Homozygous



Heterozygous



Homozygous recessive



Incompletely dominant

## Explanation

If the offspring's in  $F_1$  generation of test cross are 100% dominant then the dominant individual is homozygotes and if the offspring's in  $F_1$  generation are 1:1 their dominant individual is heterozygous.





Correct



Unattempted



Incorrect



3/5

Q : The genes for pod colour and flower colour are located on the:



Same chromosome



Two chromosomes of the homologues pair



Two chromosomes of non-homologous pairs



Two different sister chromatids

## Explanation

Pod color and flower color are two different traits.



Correct



Unattempted



Incorrect



4/5

Q : A pea plant producing four types of gametes must have the genotype as:



RRYY



RrYY



rrYy



RrYy

### Explanation

Rr Yy form gametes: RY Ry rY ry



Correct



Unattempted



Incorrect



5/5

Q : Chance of an event to occur is called:



Recombination



Probability



Product rule



Allele frequency

## Explanation

Probability is used to measure the chances or likelihood of an event to occur, a hypothesis being correct, or a scientific prediction being true. It is used in predicting the outcome of a [genetic cross](#) or of a [random](#) experiment.



## QUIZZES

### Practice Test 72



5 Questions



5 min

Topics

Dominance Relations

[Start Quiz](#)





1/5



5 min



Hint

Q : What happens when both alleles of a gene pair independently express in a heterozygote?



Dominance



Incomplete dominance



Over dominance



Codominance



2/5



5 min



Hint

Q : A heterozygote offspring quantitatively exceeds the phenotypic expression of both the homozygote parents due to:



Dominance



Incomplete dominance



Over dominance



Codominance



3/5



5 min



Hint

**Q : When different alleles of a gene that are both expressed in heterozygous condition, it is called:**

A

Dominance

B

Co dominance

C

Over dominance

D

Epistasis



4/5



5 min



Hint

Q : Eye colour in *Drosophila* shows:

A

Complete dominance

B

Incomplete dominance

C

Over dominance

D

Co-dominance



5/5



5 min



Hint

Q : Different alleles of a gene that are expressed fully in a heterozygote condition are called:

A

Dominant

B

Recessive

C

Partial dominant

D

Co-dominant



Correct



Unattempted



Incorrect



1/5

Q : What happens when both alleles of a gene pair independently express in a heterozygote?



Dominance



Incomplete dominance



Over dominance



Codominance

## Explanation

In codominance both alleles of a gene pair express and phenotype is distinct from both homozygotes.



Correct



Unattempted



Incorrect



2/5

Q : A heterozygote offspring quantitatively exceeds the phenotypic expression of both the homozygote parents due to:



Dominance



Incomplete dominance



Over dominance



Codominance

## Explanation

In over dominance allele overexpress and phenotype exceeded from both homozygotes.



Correct



Unattempted



Incorrect



3/5

**Q : When different alleles of a gene that are both expressed in heterozygous condition, it is called:**



Dominance



Co dominance



Over dominance



Epistasis

## Explanation

AB and MN type blood group is an example of co-dominance.





Correct



Unattempted



Incorrect



4/5

Q : Eye colour in *Drosophila* shows:

A

Complete dominance

B

Incomplete dominance

C

Over dominance

D

Co-dominance

## Explanation

The over dominant heterozygote exceeds in quantity the phenotypic expression of both the homozygotes. Heterosis is a condition in genetics where the phenotype of the heterozygote lies outside the phenotypical range of both homozygous parents.



Correct



Unattempted



Incorrect



5/5

Q : Different alleles of a gene that are expressed fully in a heterozygote condition are called:



Dominant



Recessive



Partial dominant



Co-dominant

## Explanation

Co-dominance occurs when both the alleles express independently in heterozygote and form their respective products X and Y. The co-dominant heterozygote would have both substances at the same time.



## QUIZZES

### Practice Test 73



5 Questions



5 min

#### Topics

Multiple Alleles and ABO Blood Group System

**Start Quiz**



1/5



5 min



Hint

Q : Gene for the production of antigen A and B is located on chromosome:



9



19



11



7



2/5



5 min



Hint

Q : Number of phenotypes in ABO blood group system is/are:



1



2



3



4



3/5



5 min



Hint

Q : The ABO blood group system is controlled by \_\_\_\_\_ alleles present at \_\_\_\_\_ locus/loci.



4, 1



3, 2



1, 2



3, 1



4/5



5 min



Hint

Q : If the blood group of both baby and mother is O, all of these may be the blood group of father, except:



A



B



O



AB



5/5



5 min



Hint

Q : A person with blood group AB is donor for:



A



B



AB



O





Correct



Unattempted



Incorrect



1/5

Q : Gene for the production of antigen A and B is located on chromosome:



9



19



11



7

### Explanation

Gene-I for ABO blood group is present on chromosome number 9.



Correct



Unattempted



Incorrect



2/5

Q : Number of phenotypes in ABO blood group system is/are:

A

1

B

2

C

3

D

4

## Explanation

A blood group

B blood group

AB blood group

O blood group



Correct



Unattempted



Incorrect



3/5

Q : The ABO blood group system is controlled by \_\_\_\_\_ alleles present at \_\_\_\_\_ locus/loci.



4, 1



3, 2



1, 2



3, 1

## Explanation

ABO blood group system is an example of multiple alleles which present on same locus of chromosome number 9.



Correct



Unattempted



Incorrect



4/5

Q : If the blood group of both baby and mother is O, all of these may be the blood group of father, except:



A



B



O



AB

## Explanation

O blood group is genotypically homozygous recessive, which on cross with A and B type blood group will produce A, B or O blood groups but never form AB.



Correct



Unattempted



Incorrect



5/5

Q : A person with blood group AB is donor for:



A



B



AB



O

### Explanation

AB blood group has antigen A and B. So, AB is only donor for AB.



## QUIZZES

### Practice Test 74



5 Questions



5 min

#### Topics

Rh Blood Group System, Erythroblastosis  
Foetalis

[Start Quiz](#)



1/5



5 min



Hint

Q : Rh blood group system is named after:

A

Its discoverer

B

Rhesus monkey

C

A patient

D

Rhinoceros



2/5



5 min



Hint

Q : If homozygous Rh +ve woman marries with Rh -ve man, then what would be the risk of erythroblastosis foetalis in their children?



50%



100%



25%



0%





3/5



5 min



Hint

Q : Baby born alive with erythroblastosis foetalis may suffer from severe anemia and:



Leucaemia



Thalassaemia



Oedema



Jaundice



4/5



5 min



Hint

Q : Erythroblastosis foetalis is due to:

A

ABO incompatibility

B

Rh incompatibility

C

MN incompatibility

D

None of these



5/5



5 min



Hint

Q : If Rh -ve woman is married to a Rh +ve man whose father was also Rh -ve. What is probable risk of erythroblastosis foetalis in their babies?

A

25%

B

50%

C

75%

D

100%



Correct



Unattempted



Incorrect



1/5

Q : Rh blood group system is named after:



Its discoverer



Rhesus monkey



A patient



Rhinoceros

## Explanation

Rh blood group system is defined on the basis of presence of Rh factor on the surface of RBCs. Its antigen was first discovered in the Rhesus monkey.





Correct



Unattempted



Incorrect



2/5

Q : If homozygous Rh +ve woman marries with Rh -ve man, then what would be the risk of erythroblastosis foetalis in their children?



50%



100%



25%



0%

### Explanation

When Rh +ve man marry with Rh -ve woman and they conceive a child having Rh +ve blood group then there is chance of erythroblastosis foetalis.





Correct



Unattempted



Incorrect



3/5

Q : Baby born alive with erythroblastosis foetalis may suffer from severe anemia and:

A

Leucaemia

B

Thalassaemia

C

Oedema

D

Jaundice

## Explanation

In erythroblastosis foetalis, RBCs break and bilirubin is produced, which leads to severe anemia and jaundice.



Correct



Unattempted



Incorrect



4/5

Q : Erythroblastosis foetalis is due to:



ABO incompatibility



Rh incompatibility



MN incompatibility



None of these

## Explanation

When Rh +ve man marry with Rh -ve woman and they conceive a child having Rh +ve blood group then there is a chance of erythroblastosis foetalis.





Correct



Unattempted



Incorrect



5/5

Q : If Rh -ve woman is married to a Rh +ve man whose father was also Rh -ve. What is probable risk of erythroblastosis foetalis in their babies?



25%



50%



75%



100%

### Explanation

If the man's genotype is heterozygous for Rh +ve (Dd), half of their offspring will be Rh +ve.





## QUIZZES

### Practice Test 75



4 Questions



5 min

Topics

Epistasis

[Start Quiz](#)



1/4



5 min



Hint

Q : Bombay phenotype is an example of:

A

Pleiotropy

B

Dominance

C

Probability

D

Epistasis



2/4



5 min



Hint

Q : The interaction between different genes occupying different loci is called:

A

Epistasis

B

Pleiotropy

C

Dominance

D

Multiple alleles



3/4



5 min



Hint

Q : H gene for the insertion of sugar onto a glycoprotein present on the surface of RBC is located at chromosome:



9



19



11



7



4/4



5 min



Hint

Q : What would be phenotype of a person with genotype  $I^A I^B$ , hh, dd?



O -ve



AB +ve



AB -ve



O +ve



Correct



Unattempted



Incorrect



1/4

Q : Bombay phenotype is an example of:

A

Pleiotropy

B

Dominance

C

Probability

D

Epistasis

## Explanation

In Bombay phenotype H-gene present on chromosome No. 19 interferes with I-gene present on chromosome No. 9.



Correct



Unattempted



Incorrect



2/4

Q : The interaction between different genes occupying different loci is called:



Epistasis



Pleiotropy



Dominance



Multiple alleles

## Explanation

Epistatic gene present on different locus while dominance is a relation between genes of same locus on respective homologous pair.



Correct



Unattempted



Incorrect



3/4

Q : H gene for the insertion of sugar onto a glycoprotein present on the surface of RBC is located at chromosome:

A

9

B

19

C

11

D

7

### Explanation

Gene H help in attachment of antigen A and B on the surface of RBCs.





Correct



Unattempted



Incorrect



4/4

Q : What would be phenotype of a person with genotype  $I^A I^B$ , hh, dd?



O -ve



AB +ve



AB -ve



O +ve

### Explanation

Gene 'h' is epistatic gene for gene "I".



## QUIZZES

### Practice Test 76



5 Questions



5 min

#### Topics

Pleiotropy, Continuously Varying Traits

[Start Quiz](#)



1/5



5 min



Hint

Q : When a single gene has multiple phenotypic effects, the phenomenon is called:



Codominance



Epistasis



Pleiotropy



Sex-linkage



2/5



5 min



Hint

Q : In cats, the dominant W allele not only makes fur pure white but also causes:



Blindness



Deafness



Mental retardation



Intelligence



3/5



5 min



Hint

Q : How many gene pairs contribute to the wheat grain color?



One



Two



Three



Four



4/5



5 min



Hint

Q : Tongue rolling is due to:

A

Single dominant gene

B

Single recessive gene

C

Polygenic inheritance

D

Continuously varying trait



5/5



5 min



Hint

Q : In polygenic traits, each polygene is having a small \_\_\_\_\_ effect on the character.



Positive only



Negative only



Nil



Positive or negative



5/5



5 min



Hint

Q : In polygenic traits, each polygene is having a small \_\_\_\_\_ effect on the character.



Positive only



Negative only



Nil



Positive or negative





Correct



Unattempted



Incorrect



1/5

Q : When a single gene has multiple phenotypic effects, the phenomenon is called:

A

Codominance

B

Epistasis

C

Pleiotropy

D

Sex-linkage

## Explanation

Pleiotropic genes control more than one trait.



Correct



Unattempted



Incorrect



2/5

Q : In cats, the dominant W allele not only makes fur pure white but also causes:



Blindness



Deafness



Mental retardation



Intelligence

## Explanation

Allele w' in homozygous recessive form in normal cats will form hairs in the inner ear for sense of sound and melanocytes for fur pigment.



Correct



Unattempted



Incorrect



3/5

Q : How many gene pairs contribute to the wheat grain color?



One



Two



Three



Four

## Explanation

Wheat grain color is a polygenic trait which is control by three gene pairs (Aa, Bb, Cc) or six alleles.



Correct



Unattempted



Incorrect



4/5

Q : Tongue rolling is due to:



Single dominant gene



Single recessive gene



Polygenic inheritance



Continuously varying trait

## Explanation

Tongue rolling is discontinuous variation control by single gene at same locus.





Correct



Unattempted



Incorrect



5/5

Q : In polygenic traits, each polygene is having a small \_\_\_\_\_ effect on the character.

A

Positive only

B

Negative only

C

Nil

D

Positive or negative

## Explanation

The type of gene actions where by each of two alleles contributes equally to the production of qualitative phenotypes neither allele is dominant.



## QUIZZES

### Practice Test 77



5 Questions



5 min

Topics

Gene Linkage

[Start Quiz](#)



1/5



5 min



Hint

Q : Gene linkage is:

A

Physical relation

B

Physiological relation

C

Both of these

D

None of these



2/5



5 min



Hint

Q : Which of the following trait is not X linked?

A

Color blindness

B

Gout

C

Haemophilia

D

Leukemia





3/5



5 min



Hint

Q : The chances of variations are decreased by:

A

Crossing over

B

Meiosis

C

Gene linkage

D

Genetic recombination



4/5



5 min



Hint

Q : Genes for color blindness, haemophilia and gout are linked to chromosome:



7



11



12



23



5/5



5 min



Hint

Q : Which of the following represents an autosomal linkage group?

A

Color blindness, haemophilia, gout

B

Albinism, leukemia, gout

C

Sickle cell anemia, leukemia, albinism

D

Sickle cell anemia, haemophilia, gout



Correct



Unattempted



Incorrect



1/5

Q : Gene linkage is:

A

Physical relation

B

Physiological relation

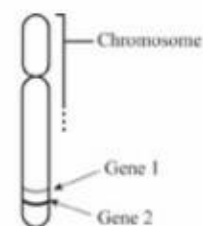
C

Both of these

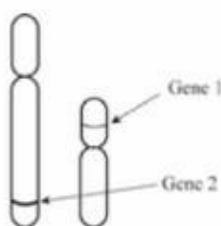
D

None of these

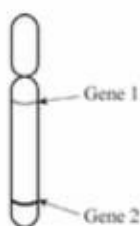
## Explanation



Linked



Not Linked



Not Linked



Correct



Unattempted



Incorrect



1/5

Q : Gene linkage is:



Physical relation



Physiological relation

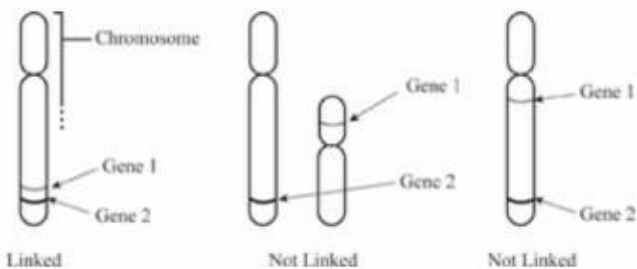


Both of these



None of these

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Which of the following trait is not X linked?

A

Color blindness

B

Gout

C

Haemophilia

D

Leukemia

## Explanation

Gene for leukemia present on autosomal chromosome number 11.



Correct



Unattempted



Incorrect



3/5

Q : The chances of variations are decreased by:

A

Crossing over

B

Meiosis

C

Gene linkage

D

Genetic recombination

## Explanation

A chromosome carries its linked genes en bloc in the form of linkage group, because these genes cannot assort independently during meiosis so reduce chances for variation.



Correct



Unattempted



Incorrect



4/5

Q : Genes for color blindness, haemophilia and gout are linked to chromosome:

A

7

B

11

C

12

D

23

### Explanation

Haemophilia, color blindness and gout are X-linked recessive traits.





Correct



Unattempted



Incorrect



5/5

Q : Which of the following represents an autosomal linkage group?



Color blindness, haemophilia, gout



Albinism, leukemia, gout



Sickle cell anemia, leukemia, albinism



Sickle cell anemia, haemophilia, gout

## Explanation

Gene for anemia, leukemia and albinism are present on autosomal chromosome 11.



## QUIZZES

### Practice Test 78



3 Questions



5 min

#### Topics

Crossing Over, Crossing Over or  
Recombination Frequency

[Start Quiz](#)



1/3



5 min



Hint

Q : Crossing over is an exchange of:

A

Segment between non-sister chromatid of homologous chromosomes

B

Segment between sister chromatid of nonhomologous chromosomes

C

Segment between non-sister chromatid of non-homologous chromosome

D

Segment between any two chromosomes



2/3



5 min



Hint

Q : Which phenomenon provides the raw material for evolution?

A

Independent assortment

B

Crossing over

C

Gene linkage

D

Both A and B



3/3



5 min



Hint

Q : Number of chromosomes in male *Ascaris incurva* is/are:



13



26



35



42



Incorrect



1/3

Q : Crossing over is an exchange of:



Segment between non-sister chromatid of homologous chromosomes



Segment between sister chromatid of nonhomologous chromosomes

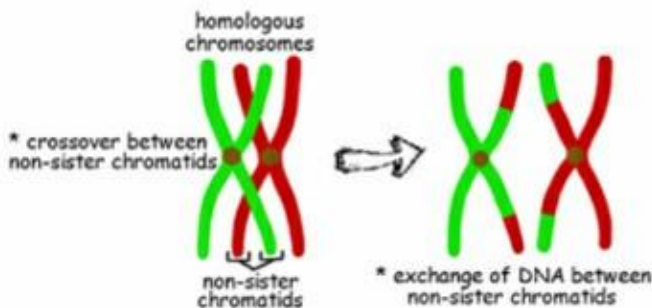


Segment between non-sister chromatid of non-homologous chromosome



Segment between any two chromosomes

## Explanation





Correct



Unattempted



Incorrect



2/3

Q : Which phenomenon provides the raw material for evolution?



Independent assortment



Crossing over



Gene linkage



Both A and B

## Explanation

Gene linkage reduce chances of variations.



Correct



Unattempted



Incorrect



3/3

Q : Number of chromosomes in male *Ascaris incurva* is/are:



13



26



35



42

## Explanation

Male *Ascaris* have 35 chromosomes ( $8X+1Y+26A$ ). Female *Ascaris* have 42 chromosomes ( $16X + 26A$ ).





## QUIZZES

### Practice Test 79



5 Questions



5 min

#### Topics

Sex Chromosomes, Patterns of Sex  
Determination

[Start Quiz](#)



1/5



5 min



Hint

Q : Nullo gametes are developed in:

A

Humans

B

Butterfly

C

Drosophila

D

Grass hopper



2/5



5 min



Hint

Q : Eggs are sex determining factors in:



Moth



Drosophila



Ascaris



Man



3/5



5 min



Hint

Q : Sex chromosomes XY present in females of:

A

Humans

B

Butterflies

C

Drosophila

D

Grass hopper



4/5



5 min



Hint

Q : XO condition in *Drosophila* produces:

A

Sterile male

B

Fertile female

C

Sterile female

D

Fertile male



5/5



5 min



Hint

Q : Female is heterogametic in:

A

Humans

B

Butterflies

C

Drosophila

D

Grass hopper



Correct



Unattempted



Incorrect



1/5

Q : Nullo gametes are developed in:



Humans



Butterfly



Drosophila



Grass hopper

## Explanation

A gamete without any sex chromosome is nullo gamete.



Correct



Unattempted



Incorrect



2/5

Q : Eggs are sex determining factors in:



Moth



Drosophila



Ascaris



Man

## Explanation

In moth, birds and butterflies male is homozygous while female is heterozygous with two types of eggs (ZW).





Correct



Unattempted



Incorrect



3/5

Q : Sex chromosomes XY present in females of:



Humans



Butterflies



Drosophila



Grass hopper

## Explanation

In moth, birds and butterflies male is homozygous (produce same type of sperms) while female is heterozygous with two type of eggs (XY).



Correct



Unattempted



Incorrect



4/5

Q : XO condition in *Drosophila* produces:



Sterile male



Fertile female



Sterile female



Fertile male

## Explanation

In human XO is due to monosomy of X-chromosome and cause turner syndrome.



Correct



Unattempted



Incorrect



5/5

Q : Female is heterogametic in:



Humans



Butterflies



Drosophila



Grass hopper

## Explanation

In butterflies male is XX (ZZ) type and female is XY (ZW) type.



## QUIZZES

### Practice Test 80



2 Questions



5 min

#### Topics

Comparison of Drosophila and Humans, Sex  
Determination in Plants

[Start Quiz](#)



1/2



5 min



Hint

Q : In *Drosophila*, male determining genes are located on:

A

X chromosome

B

Y chromosome

C

Autosomes

D

Both on X and Y chromosomes



2/2



5 min



Hint

Q : The genic system for determination of sex is present in:



Ginkgo



Ant



Ascaris



Yeast



Correct



Unattempted



Incorrect



1/2

Q : In *Drosophila*, male determining genes are located on:



X chromosome



Y chromosome



Autosomes



Both on X and Y chromosomes

## Explanation

In *Drosophila* X-chromosome is female determining and the autosomes are male determining.



Correct



Unattempted



Incorrect



2/2

Q : The genic system for determination of sex is present in:

A

Ginkgo

B

Ant

C

Ascaris

D

Yeast

## Explanation

In genic system the sex are specified by simple allelic differences at a small number of locus.







## Q U I Z Z E S

### Practice Test 81



5 Questions



5 min

#### Topics

Sex Linkage in Drosophila, Sex Linkage in Humans, Genetics of Haemophilia, Genetics of Colour Blindness, Testicular Feminization Syndrome

[Start Quiz](#)



1/5



5 min



Hint

Q : *Drosophila* males for eye color are:

A

Homozygous

B

Heterozygous

C

Hemizygous

D

None of these



2/5



5 min



Hint

Q : Which of the following shows zigzag transmission from maternal grandfather through a carrier daughter to a grandson?



Autosomal



X-linked



Y-linked



X and Y linked



3/5



5 min



Hint

Q : When a hemophilic carrier woman marries a normal man, who among her offspring may be affected?

A

All her children

B

All her daughters

C

Half of her daughters

D

Half of her sons



4/5



5 min



Hint

Q : What is the risk of a color-blind child in a family when father is color-blind but mother is heterozygous normal?



Zero%



25%



50%



100%



5/5



5 min



Hint

Q : Persons with testicular feminization syndrome have chromosomes:



XX



XY



XYY



XXY



Correct



Unattempted



Incorrect



1/5

Q : *Drosophila* males for eye color are:



Homozygous



Heterozygous



Hemizygous



None of these

## Explanation

Hemizygous is condition having a single copy of a gene instead of the customary two copies. All the genes on single X-chromosome in the male are hemizygous.





Correct



Unattempted



Incorrect



2/5

Q : Which of the following shows zigzag transmission from maternal grandfather through a carrier daughter to a grandson?



Autosomal



X-linked



Y-linked



X and Y linked

## Explanation

X-linked recessive traits are more commonly express in male and less in female. In female these traits express only when she is homozygous recessive.





Correct



Unattempted



Incorrect



3/5

Q : When a hemophilic carrier woman marries a normal man, who among her offspring may be affected?



All her children



All her daughters



Half of her daughters



Half of her sons

## Explanation

Carrier mother will may transfer haemophilia gene to one of her son or to her daughter, but daughter will be normal because she also inherits dominant gene from her father.



Correct



Unattempted



Incorrect



4/5

Q : What is the risk of a color-blind child in a family when father is color-blind but mother is heterozygous normal?



Zero%



25%



50%



100%

### Explanation

In this case one daughter and one son will be effected, one son and daughter will be normal.



Correct



Unattempted



Incorrect



5/5

Q : Persons with testicular feminization syndrome have chromosomes:



XX



XY



XYY



XXY

## Explanation

tfm is X-linked recessive trait. tfm gene on X-chromosome develops them physically in female.





## QUIZZES

### Practice Test 82



5 Questions



5 min

#### Topics

X-Linked Dominant Inheritance, Y-Linked Inheritance, Sex Limited Trait, Sex Influenced Trait

[Start Quiz](#)



1/5



5 min



Hint

Q : X linked dominant traits are:

A

More common in females than males

B

More common in males than females

C

Equal in both sexes

D

Present only in females



2/5



5 min



Hint

Q : SRY is located at:

A

Long arm of Y chromosome

B

Short arm of Y chromosome

C

X chromosome

D

Both arms of Y chromosome



3/5



5 min



Hint

Q : SRY gene is expressed at \_\_\_\_\_ of pregnancy.

A

3<sup>rd</sup> week

B

4<sup>th</sup> week

C

5<sup>th</sup> week

D

6<sup>th</sup> week



4/5



5 min



Hint

Q : Which one of the following is a sex-limited trait in man?

A

Beard growth

B

Height

C

Weight

D

Diabetes





5/5



5 min



Hint

Q : Which of the following options is true for baldness in female?

A

Homozygous dominant

B

Heterozygous

C

Homozygous recessive

D

Hemizygous recessive



Correct



Unattempted



Incorrect



1/5

Q : X linked dominant traits are:



More common in females than males



More common in males than females



Equal in both sexes



Present only in females

## Explanation

Hypophosphatemic ricket is X-linked dominant trait in which all daughters of an effected father are effected, if disease gene present in mother than disease equally transfer to all offspring.



Correct



Unattempted



Incorrect



2/5

Q : SRY is located at:

A

Long arm of Y chromosome

B

Short arm of Y chromosome

C

X chromosome

D

Both arms of Y chromosome

## Explanation

SRY gene on Y chromosome determine maleness in man. It is male switch which triggers developmental process towards maleness after 6<sup>th</sup> week of pregnancy.



Correct



Unattempted



Incorrect



3/5

Q : SRY gene is expressed at \_\_\_\_\_ of pregnancy.

3<sup>rd</sup> week4<sup>th</sup> week5<sup>th</sup> week6<sup>th</sup> week

## Explanation

SRY gene on Y chromosome determine maleness in man. It is male switch which triggers developmental process towards maleness after 6<sup>th</sup> week of pregnancy.



Correct



Unattempted



Incorrect



4/5

Q : Which one of the following is a sex-limited trait in man?



Beard growth



Height



Weight



Diabetes

## Explanation

Sex-limited traits are sex linked or autosomal and they limited to only one sex like beard growth only in male & mammary glands in only female.



Correct



Unattempted



Incorrect



5/5

Q : Which of the following options is true for baldness in female?



Homozygous dominant



Heterozygous



Homozygous recessive



Hemizygous recessive

## Explanation

Sex influenced traits are controlled by an allele that is expressed as dominant in one sex but recessive in the other. Pattern baldness is dominant trait in male while it is recessive in females.



## QUIZZES

### Practice Test 83



5 Questions



5 min

#### Topics

Diabetes Mellitus and its Genetic Basis

[Start Quiz](#)





1/5



5 min



Hint

Q : About 50% cases of MODY are caused by mutations in:

A

Kinase gene

B

Galactokinase gene

C

Glucokinase gene

D

Proteinase





2/5



5 min



Hint

Q : Diabetics are unable to metabolize blood:



Urea



Protein



Fat



Sugar



3/5



5 min



Hint

Q : \_\_\_\_\_ diabetes mellitus is insulin dependent.



Type I



Type II



Both of these



None of these



4/5



5 min



Hint

Q : Type II diabetes mellitus accounts of \_\_\_\_\_% of all diabetes.



60%



70%



90%



95%



5/5



5 min



Hint

Q : Diabetes Mellitus type II diseases can be treated with:

A

Endogenous insulin

B

Exogenous insulin

C

Exercise

D

Fatty food in take



Correct



Unattempted



Incorrect



1/5

Q : About 50% cases of MODY are caused by mutations in:



Kinase gene



Galactokinase gene



Glucokinase gene



Proteinase

## Explanation

MODY is a type of diabetes that run in the families. It is autosomal dominant trait & effects 2-5% of individual before age of 25 years.



Correct



Unattempted



Incorrect



2/5

Q : Diabetics are unable to metabolize blood:



Urea



Protein



Fat



Sugar

## Explanation

Diabetes is a hereditary disease in which person have deficiency of insulin or specific enzyme to metabolize sugar.



Correct



Unattempted



Incorrect



3/5

Q : \_\_\_\_\_ diabetes mellitus is insulin dependent.



Type I



Type II



Both of these



None of these

## Explanation

Diabetes type I is multifactorial trait and is insulin dependent while diabetes type II is non-insulin dependent.



Correct



Unattempted



Incorrect



4/5

Q : Type II diabetes mellitus accounts of \_\_\_\_\_% of all diabetes.



60%



70%



90%



95%

## Explanation

Chances of diabetes type-II are due to different types of risk factors like genetics and lifestyle. If the risk factor is in genes then it can't be reduced but by change in lifestyle make chances of diseases to reduce.





Correct



Unattempted



Incorrect



5/5

Q : Diabetes Mellitus type II diseases can be treated with:



Endogenous insulin



Exogenous insulin



Exercise



Fatty food in take

## Explanation

Chances of diabetes type-II are due to different types of risk factors like genetics and lifestyle. If the risk factor is in genes then it can't be reduced but by change in lifestyle (regular exercise, avoid from fatty foods etc.) make chances of diseases to reduce. .





## QUIZZES

### Practice Test 84



4 Questions



5 min

#### Topics

How to get a gene?

[Start Quiz](#)



1/4



5 min



Hint

Q : The gene of interest can be obtained by all of these except:

A

Make it from mRNA

B

Chemically synthesize it

C

Obtain it from bacterial vector

D

Isolate it from chromosome



2/4



5 min



Hint

Q : The gene of interest produced by mRNA using reverse transcriptase is called:

A

Complementary RNA

B

Complementary mRNA

C

Complementary DNA

D

All of the above



3/4



5 min



Hint

Q : Genes can be synthesized chemically in laboratory if these are:

A

Specific

B

Small

C

Mature

D

Large



4/4



5 min



Hint

Q : Complementary DNA molecule is synthesized from \_\_\_\_ using reverse transcriptase.



cDNA



mRNA



tRNA



rRNA



Correct



Unattempted



Incorrect



1/4

Q : The gene of interest can be obtained by all of these except:



A Make it from mRNA



B Chemically synthesize it



C Obtain it from bacterial vector



D Isolate it from chromosome

## Explanation

Vector is used for implantation of gene of interest into host.





Correct



Unattempted



Incorrect



2/4

Q : The gene of interest produced by mRNA using reverse transcriptase is called:



Complementary RNA



Complementary mRNA



Complementary DNA



All of the above

## Explanation

Reverse transcriptase produces strand of DNA by reading mRNA. This is called complementary DNA.





Correct



Unattempted



Incorrect



3/4

Q : Genes can be synthesized chemically in laboratory if these are:



Specific



Small



Mature



Large

## Explanation

If gene is large size can be obtained from chromosome by cutting the chromosome on the flanking site of the gene by using special enzymes, while small size can be formed artificially in laboratory.



Correct



Unattempted



Incorrect



4/4

Q : Complementary DNA molecule is synthesized from \_\_\_\_ using reverse transcriptase.

A

cDNA

B

mRNA

C

tRNA

D

rRNA

## Explanation

Synthetic DNA in which the sequence of bases is complementary to that of a given example of DNA is called complementary DNA.



## QUIZZES

### Practice Test 85



5 Questions



5 min

#### Topics

Molecular Scissor (Restriction  
Endonucleases), Molecular Carrier (Vector)

[Start Quiz](#)



1/5



5 min



Hint

Q : The enzymes which are used to cut out the gene of interest are known as:

A

DNA ligases

B

DNA polymerases

C

RNA polymerases

D

Restriction endonucleases



2/5



5 min



Hint

Q : The enzymes used for cutting DNA at different points are:



Ligases



Restriction endonucleases



Polymerases



Nucleases



3/5



5 min



Hint

Q : Restriction endonucleases are the natural enzymes of:



Bacteria



Fungi



Viruses



Protozoa



4/5



5 min



Hint

Q : pSC101 has antibiotic resistance gene for:

A

Tetracycline

B

Ampicillin

C

Neomycin

D

Ergotine



5/5



5 min



Hint

Q : pBR322 has antibiotic resistance genes for:

A

Tetracycline and ampicillin

B

Tetracycline only

C

Ampicillin Only

D

Streptomycin only





Correct



Unattempted



Incorrect



1/5

Q : The enzymes which are used to cut out the gene of interest are known as:

A

DNA ligases

B

DNA polymerases

C

RNA polymerases

D

Restriction endonucleases

## Explanation

DNA ligase, polymerase and RNA polymerase play role in phosphodiester bond formation and restriction endonuclease break them at palindromic sequence.



Correct



Unattempted



Incorrect



2/5

Q : The enzymes used for cutting DNA at different points are:



Ligases



Restriction endonucleases



Polymerases



Nucleases

## Explanation

Restriction endonucleases are used to cut from different points while nucleases includes both endonucleases and exonucleases cuts from terminal.



Correct



Unattempted



Incorrect



3/5

Q : Restriction endonucleases are the natural enzymes of:



Bacteria



Fungi



Viruses



Protozoa

## Explanation

Restriction endonucleases are present in bacteria to protect it from attack of bacteriophage.



Correct



Unattempted



Incorrect



4/5

Q : pSC101 has antibiotic resistance gene for:



Tetracycline



Ampicillin



Neomycin



Ergotine

## Explanation

pBR322 is resistant for both tetracycline and ampicillin.





Correct



Unattempted



Incorrect



5/5

Q : pBR322 has antibiotic resistance genes for:



Tetracycline and ampicillin



Tetracycline only



Ampicillin Only



Streptomycin only

## Explanation

pSC101 has resistant gene for tetracycline.



## QUIZZES

### Practice Test 86



5 Questions



5 min

#### Topics

Recombinant DNA, Expression of the  
Recombinant DNA

[Start Quiz](#)



1/5



5 min



Hint

Q : Gene of interest is joined to the open ends of plasmid by:

A

DNA ligase

B

RNA polymerase

C

DNA polymerase

D

Primase



2/5



5 min



Hint

Q : Recombinant DNA is also called:

A

Chimaeric DNA

B

True DNA

C

Different DNA

D

Daughter DNA





3/5



5 min



Hint

Q : The "Sealing Enzyme" is known as:

A

DNA ligase

B

DNA polymerase

C

RNA polymerase

D

Molecular scissor



4/5



5 min



Hint

Q : Which solution is used to make bacterial cell more permeable for the uptake of recombinant DNA?

A

Cesium chloride

B

Calcium chloride

C

Calcium carbide

D

Calcium phosphate



5/5



5 min



Hint

Q : Which of these would you not expect to be a biotechnology product?

A

Steroid hormones

B

Modified enzymes

C

DNA probes

D

Protein hormones

Q : Gene of interest is joined to the open ends of plasmid by:

**A**

DNA ligase

**B**

RNA polymerase

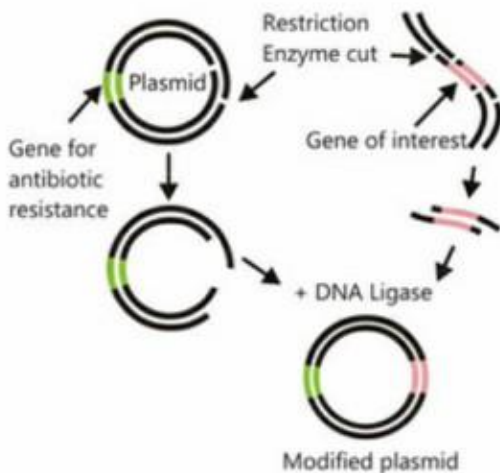
**C**

DNA polymerase

**D**

Primase

## Explanation





Correct



Unattempted



Incorrect



2/5

Q : Recombinant DNA is also called:



Chimaeric DNA



True DNA



Different DNA



Daughter DNA

## Explanation

Chimaeric DNA is another name for recombinant DNA.



Correct



Unattempted



Incorrect



3/5

Q : The "Sealing Enzyme" is known as:



DNA ligase



DNA polymerase



RNA polymerase



Molecular scissor

## Explanation

DNA ligase forms phosphodiester linkage between two different DNA fragments.



Correct



Unattempted



Incorrect



4/5

Q : Which solution is used to make bacterial cell more permeable for the uptake of recombinant DNA?



Cesium chloride



Calcium chloride



Calcium carbide



Calcium phosphate

## Explanation

Cesium chloride is used to create density gradient during centrifugation and silicon carbide needles are used in vortex mixing method to create pores in egg membrane. While  $\text{CaCl}_2$  increases permeability of membrane.





Correct



Unattempted



Incorrect



5/5

Q : Which of these would you not expect to be a biotechnology product?



Steroid hormones



Modified enzymes



DNA probes



Protein hormones

## Explanation

We can obtain gene and gene products, which are protein in nature by biotechnology.







## QUIZZES

### Practice Test 87



5 Questions



5 min

#### Topics

The Human Genome Project

[Start Quiz](#)



1/5



5 min



Hint

Q : Persons with Huntington's disease have a unique site where a restriction enzyme cuts:



DNA



RNA



Lipids



Proteins



2/5



5 min



Hint

Q : What is expected to be one of the benefit of human genome project?

A

It will prove the reliability of Mendel's law of Dominance

B

It will offer a more precise understanding of defective genes causing inherited diseases

C

It will help compare the chromosomes of humans and Drosophila

D

It will show why the gene pool of a population remains stable



3/5



5 min



Hint

Q : First human chromosome that completely sequenced in 1999 was:

1<sup>st</sup> Chromosome23<sup>rd</sup> Chromosome

X Chromosome

22<sup>nd</sup> Chromosome



4/5



5 min



Hint

Q : Human genome is \_\_\_\_\_ times larger than any other genome sequenced so far.

A

20

B

25

C

200

D

1000



5/5



5 min



Hint

Q : In 1999, which human chromosome was sequenced?



X chromosome



21



22



19



Correct



Unattempted



Incorrect



1/5

Q : Persons with Huntington's disease have a unique site where a restriction enzyme cuts:



DNA



RNA



Lipids



Proteins

## Explanation

Huntington's disease is an autosomal dominant disorder, which means that a person needs only one copy of the defective gene to develop the disorder.



Correct



Unattempted



Incorrect



2/5

Q : What is expected to be one of the benefit of human genome project?

A

It will prove the reliability of Mendel's law of Dominance

B

It will offer a more precise understanding of defective genes causing inherited diseases

C

It will help compare the chromosomes of humans and Drosophila

D

It will show why the gene pool of a population remains stable

## Explanation

Human genome project gives information present on each chromosome in the form of genes.





Correct



Unattempted



Incorrect



3/5

Q : First human chromosome that completely sequenced in 1999 was:

1<sup>st</sup> Chromosome23<sup>rd</sup> Chromosome

X Chromosome

22<sup>nd</sup> Chromosome

## Explanation

Chromosome number 22 is the second smallest human chromosome, spanning about 49 million DNA base pairs and representing between 1.5 and 2% of the total DNA in cells.





Correct



Unattempted



Incorrect



4/5

Q : Human genome is \_\_\_\_\_ times larger than any other genome sequenced so far.

A

20

B

25

C

200

D

1000

## Explanation

Human genome project is 25 times larger than any other genome sequenced so far. The sheer quantity of informations provided by the human genome project is unprecedented in biology.





Correct



Unattempted



Incorrect



5/5

Q : In 1999, which human chromosome was sequenced?



X chromosome



21



22



19

## Explanation

Chromosome 22 is the second smallest human chromosome, spanning about 49 million DNA base pairs and representing between 1.5 and 2% of the total DNA in cells.





## QUIZZES

### Practice Test 88



5 Questions



5 min

#### Topics

Ecology & Ecosystem, Ecosystem, Biosphere,  
Autecology & Synecology, Components of  
Ecosystem

[Start Quiz](#)



1/5



5 min



Hint

Q : Ecology is the study of:

A

The relationship between living things and their environment

B

The interactions between biotic factor

C

The interactions between organisms and its origin

D

All of the above



2/5



5 min



Hint

Q : When living and non-living interact to produce a stable system in which exchange of material with flow of energy takes place, it forms a/an:

A

Environment

B

Ecosystem

C

Stable community

D

Ecological succession



3/5



5 min



Hint

Q : Which definition of Niche was presented by Joseph Grinnell?

A

It is a species occupation

B

Role of specie played in an ecosystem

C

Ultimate distributional unit within which species is restrained

D

Both A & B



4/5



5 min



Hint

Q : Study of effect of pollution on 50 plants of soybean comes under \_\_\_\_\_.

A

Community ecology

B

Synecology

C

Autecology

D

Ecology





5/5



5 min



Hint

Q : All are biotic components except:

A

Producers

B

Consumers

C

Topography

D

Decomposers



Correct



Unattempted



Incorrect



1/5

Q : Ecology is the study of:



The relationship between living things and their environment



The interactions between biotic factor



The interactions between organisms and its origin



All of the above

## Explanation

The term ecology comes from the Greek words oikos meaning "the family household", and logy meaning "the study of". So, it is defined as the study of the relationship of animals to their environment.





Correct



Unattempted



Incorrect



2/5

Q : When living and non-living interact to produce a stable system in which exchange of material with flow of energy takes place, it forms a/an:



Environment



Ecosystem



Stable community



Ecological succession

## Explanation

The "eco" means the world is related to the environment and the "system" means a collection of the related parts that function as a unit. Ecosystem consists of both biotic and abiotic factors.

Q : Which definition of Niche was presented by Joseph Grinnell?

A

It is a species occupation

B

Role of specie played in an ecosystem

C

Ultimate distributional unit within which species is restrained

D

Both A & B

## Explanation

### Ecological Niche

📍 The **ecological niche** describes the functional position of an organism in its environment.

📍 A niche comprises:

📍 the **habitat** in which the organism lives.

📍 the organism's **activity pattern**: the periods of time during which it is active.

📍 the **resources** it obtains from the habitat.





Correct



Unattempted



Incorrect



4/5

Q : Study of effect of pollution on 50 plants of soybean comes under \_\_\_\_\_.

A

Community ecology

B

Synecology

C

Autecology

D

Ecology

## Explanation

Study of single population's relationship to environment is called autecology.

1

2

3

4

5



Correct



Unattempted



Incorrect



5/5

Q : All are biotic components except:



Producers



Consumers



Topography



Decomposers

## Explanation

Topography is the part of abiotic components, while biotic components include all living things.



## QUIZZES

### Practice Test 89



5 Questions



5 min

#### Topics

Food Chain, Food Web, Predation and Its  
Significance

[Start Quiz](#)





1/5



5 min



Hint

Q : All animals depend upon \_\_\_\_\_ for their food.



Producer



Consumers



Decomposers



Herbivores





2/5



5 min



Hint

Q : In which trophic level all green plants, grass and phytoplankton are included?

A

 $T_1$ 

B

 $T_2$ 

C

 $T_3$ 

D

 $T_4$



3/5



5 min



Hint

Q : Which is present at T2 Level in food web and food chain?



Producers



Primary consumer



Secondary consumer



Decomposer



4/5



5 min



Hint

Q : The animal that is caught and eaten is called:



Predator



Prey



Host



Parasite



5/5



5 min



Hint

Q : Which one of the following is not correct about predator-prey relation?

A

Seal/fish

B

Frog/mosquito

C

Hawk/small birds

D

Cat/tiger



Correct



Unattempted



Incorrect



1/5

Q : All animals depend upon \_\_\_\_\_ for their food.



Producer



Consumers



Decomposers



Herbivores

## Explanation

All animals depend on plants for their food directly or indirectly.



Incorrect



2/5

Q : In which trophic level all green plants, grass and phytoplankton are included?

A

 $T_1$ 

B

 $T_2$ 

C

 $T_3$ 

D

 $T_4$ 

## Explanation



Q : Which is present at T2 Level in food web and food chain?

A

Producers

B

Primary consumer

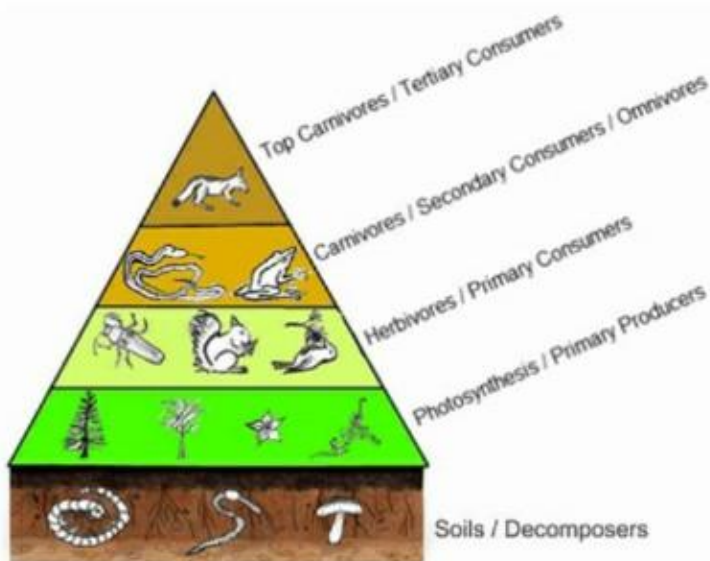
C

Secondary consumer

D

Decomposer

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : The animal that is caught and eaten is called:



Predator



Prey



Host



Parasite

## Explanation

An animal that preys on other animals is a predator. The animal that is caught and eaten is the prey. Host parasite relationship is not predation.







Correct



Unattempted



Incorrect



5/5

Q : Which one of the following is not correct about predator-prey relation?



Seal/fish



Frog/mosquito



Hawk/small birds



Cat/tiger

## Explanation

Seal preys on fish, frog preys on mosquito, hawk preys on small bird and cat preys on mouse.





Correct



Unattempted



Incorrect



5/5

Q : Which one of the following is not correct about predator-prey relation?



Seal/fish



Frog/mosquito



Hawk/small birds



Cat/tiger

## Explanation

Seal preys on fish, frog preys on mosquito, hawk preys on small bird and cat preys on mouse.





## QUIZZES

### Practice Test 90



5 Questions



5 min

#### Topics

Parasitism and Its Significance, Symbiosis

[Start Quiz](#)



1/5



5 min



Hint

Q : Diseases in living organisms caused by parasites are called:

A

Infestation

B

Endo-parasites

C

Disinfestation

D

Ecto-parasites



2/5



5 min



Hint

Q : Fungi causing dandruff in hair is an example of:

A

Ecto-parasite

B

Endo-parasite

C

Saprotrophs

D

Obligate intracellular parasite



3/5



5 min



Hint

Q : The bacteria in the root nodules fix nitrogen and convert it into:



Nitrate



Nitrite



Amino acid



Ammonia



4/5



5 min



Hint

Q : Root nodules are example of:

A

Symbiosis

B

Mutualism

C

Commensalisms

D

Parasitism



5/5



5 min



Hint

Q : The relationship between Rhizobium and Legumes is:

A

Symbiosis

B

Parasitic

C

Predation

D

Competition





Correct



Unattempted



Incorrect



1/5

Q : Diseases in living organisms caused by parasites are called:



Infestation



Endo-parasites



Disinfestation



Ecto-parasites

## Explanation

The host-parasite relationship is parasitism. The parasite disease caused by parasites is called infestation.



Correct



Unattempted



Incorrect



2/5

Q : Fungi causing dandruff in hair is an example of:



Ecto-parasite



Endo-parasite



Saprotrophs



Obligate intracellular parasite

## Explanation

Parasites that live inside the body are called endo-parasites and that live outside the body are called ecto-parasites.

Q : The bacteria in the root nodules fix nitrogen and convert it into:

A

Nitrate

B

Nitrite

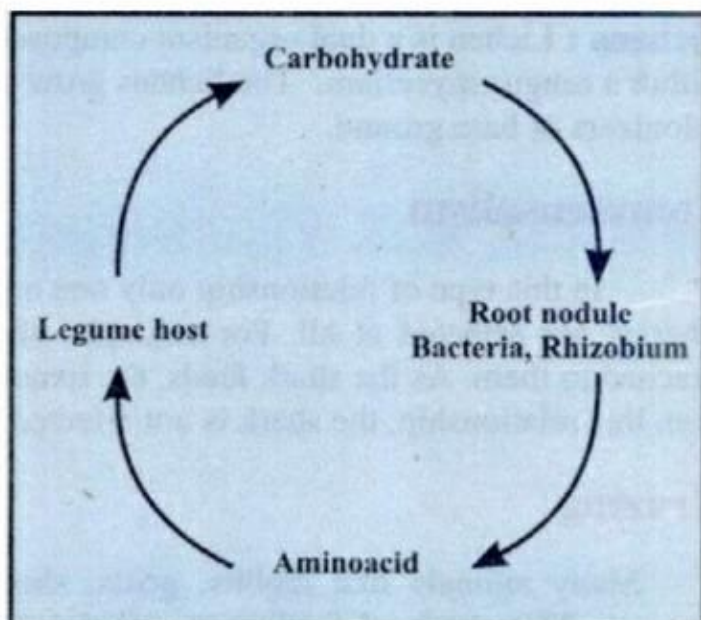
C

Amino acid

D

Ammonia

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Root nodules are example of:



Symbiosis



Mutualism



Commensalisms



Parasitism

## Explanation

The biological associations of two individuals or populations of different species. This beneficial relation may be mutualism, commensalisms or parasitism.



Correct



Unattempted



Incorrect



5/5

Q : The relationship between Rhizobium and Legumes is:



Symbiosis



Parasitic



Predation



Competition

## Explanation

An association between two organisms which brings benefit to both the organisms is symbiosis. For example, root nodules of legumes with *Rhizobium*.





## QUIZZES

### Practice Test 91



5 Questions



5 min

#### Topics

Mutualism, Commensalism, Grazing

[Start Quiz](#)



1/5



5 min



Hint

Q : The relationship between insect and flowering plants is the example of:



Parasitism



Predation



Mutualism



Commensalism





2/5



5 min



Hint

Q : Lichen is a symbiotic association between a fungus and:

A

Gymnosperm

B

Alga

C

Angiosperm

D

Diatom





3/5



5 min



Hint

Q : Relationship between Remoras and shark is an example of:

A

Commensalism

B

Mutualism

C

Predation

D

Parasitism



4/5



5 min



Hint

Q : Moderate grazing is very helpful to maintain ecosystem:



Tundra



Grassland



Pond



Desert



5/5



5 min



Hint

Q : Feeding on grass is called:

A

Grazer

B

Grazing

C

Browsing

D

Predation



Correct



Unattempted



Incorrect



1/5

Q : The relationship between insect and flowering plants is the example of:



Parasitism



Predation



Mutualism



Commensalism

## Explanation

The relationship of two different species in which both the organisms get benefit from each other is called mutualism.



Correct



Unattempted



Incorrect



2/5

Q : Lichen is a symbiotic association between a fungus and:



Gymnosperm



Alga



Angiosperm



Diatom

## Explanation

The relationship of two organisms in which both the organisms get benefit from each other is called mutualism. Lichen is an example of mutualism in which both are benefited.



Correct



Unattempted



Incorrect



3/5

Q : Relationship between Remoras and shark is an example of:



Commensalism



Mutualism



Predation



Parasitism

## Explanation

A relationship in which only one of the two organism gets benefit while other is not affected at all is called commensalism.



Correct



Unattempted



Incorrect



4/5

Q : Moderate grazing is very helpful to maintain ecosystem:



Tundra



Grassland



Pond



Desert

## Explanation

Moderate grazing destroys the competitors and helps the grass to grow well. Overgrazing may leads to the transformation of a grassland into a desert.





Correct



Unattempted



Incorrect



5/5

Q : Feeding on grass is called:



Grazer



Grazing



Browsing



Predation

## Explanation

Grazing is a very important factor in determining the ecosystem. The animals who do grazing are called grazers.







## QUIZZES

### Practice Test 92



5 Questions



5 min

#### Topics

Biogeochemical Cycles, Nitrogen Cycle,  
Nitrogen Depletion and Its Remedies

[Start Quiz](#)



1/5



5 min



Hint

Q : All of followings are macronutrients except:



Sulphur



Iron



Phosphorus



Calcium



2/5



5 min



Hint

Q : Percentage of N<sub>2</sub> in atmosphere:



58%



85%



87%



78%



3/5



5 min



Hint

Q : The conversion of nonliving material into living protoplasm is known as:



Assimilation



Respiration



Reproduction



Absorption



4/5



5 min



Hint

Q : Nitrogen makes up 78% of the gases in:



Lithosphere



Biosphere



Atmosphere



Hydrosphere



5/5



5 min



Hint

Q : The conversion of nitrates to nitrogen gas by bacteria is called:

A

Nitrification

B

Nitrogen fixation

C

De-nitrification

D

Excretion



Correct



Unattempted



Incorrect



1/5

Q : All of followings are macronutrients except:

A

Sulphur

B

Iron

C

Phosphorus

D

Calcium

## Explanation

Iron is a micronutrient.



Correct



Unattempted



Incorrect



2/5

Q : Percentage of N<sub>2</sub> in atmosphere:



58%



85%



87%



78%

### Explanation

Nitrogen makes up 78% of the gases in atmosphere.







Correct



Unattempted



Incorrect



3/5

Q : The conversion of nonliving material into living protoplasm is known as:



Assimilation



Respiration



Reproduction



Absorption

## Explanation

The process of absorbing nutrients into the body after digestion for growth and development is called assimilation.



Correct



Unattempted



Incorrect



4/5

Q : Nitrogen makes up 78% of the gases in:



Lithosphere



Biosphere



Atmosphere



Hydrosphere

## Explanation

"Atmo" means air and "sphere" means place. Nitrogen makes up 78% of the gases in air.



Correct



Unattempted



Incorrect



5/5

Q : The conversion of nitrates to nitrogen gas by bacteria is called:



Nitrification



Nitrogen fixation



De-nitrification



Excretion

## Explanation

Nitrification: The oxidation of ammonium ions.

Nitrogen gas in atmosphere is fixed by bacteria.

Excretion: Removal of waste materials.



## QUIZZES

### Practice Test 93



5 Questions



5 min

#### Topics

Fresh Water Lakes, Intervention of Man in  
Aquatic Ecosystem

[Start Quiz](#)



1/5



5 min



Hint

Q : The zone, rich in life, in a fresh water lake is called:

A

Littoral zone

B

Limnetic zone

C

Profundal zone

D

Desert



2/5



5 min



Hint

Q : The rooted plants are mainly found in \_\_\_\_\_ zone.

A

Profundal zone

B

Limnetic zone

C

Phytoplankton's

D

None of these



3/5



5 min



Hint

Q : The greatest diversity of animals in the lake is also found in:

A

Littoral zone

B

Limnetic zone

C

Profundal zone

D

Littoral and Limnetic



4/5



5 min



Hint

Q : In polluted lake which organism dominate the community?



Fish



Blue green algae



Planktons



Crustaceans





5/5



5 min



Hint

Q : Producers like \_\_\_\_\_ form a scum on the lake surface.



Diatoms



Brown algae



Red-green algae



Blue-green algae



Correct



Unattempted



Incorrect



1/5

Q : The zone, rich in life, in a fresh water lake is called:



Littoral zone



Limnetic zone



Profundal zone



Desert

## Explanation

In this zone plants get maximum light for photosynthesis to support life.



Correct



Unattempted



Incorrect



2/5

Q : The rooted plants are mainly found in \_\_\_\_\_ zone.



Profundal zone



Limnetic zone



Phytoplankton's



None of these

## Explanation

Rooted plants are mostly found in littoral zone.



Correct



Unattempted



Incorrect



3/5

Q : The greatest diversity of animals in the lake is also found in:



Littoral zone



Limnetic zone



Profundal zone



Littoral and Limnetic

## Explanation

Water in littoral zone is shallow and due to maximum light and anchorage it support diverse group of organisms.



Correct



Unattempted



Incorrect



4/5

Q : In polluted lake which organism dominate the community?



Fish



Blue green algae



Planktons



Crustaceans

## Explanation

Due to adequate nutrients in water blue green algae grow rapidly in water and form scum which deprive submerged plants of light, as a result they die.



Correct



Unattempted



Incorrect



5/5

Q : Producers like \_\_\_\_\_ form a scum on the lake surface.



Diatoms



Brown algae



Red-green algae



Blue-green algae

## Explanation

Due to adequate nutrients in water blue green algae grow rapidly in water and form scum which deprive submerged plants of light, as a result they die.



## QUIZZES

### Practice Test 94



5 Questions



5 min

#### Topics

Common Features of Aquatic Ecosystem,  
Productivity of Aquatic Ecosystem

[Start Quiz](#)



1/5



5 min



Hint

Q : Fresh water ecosystem covers less than-----of earth crust.



2%



4%



1%



6%





2/5



5 min



Hint

Q : Spiny projection on planktonic creatures help to:

A

Keep them from sinking

B

Increase surface area for photosynthesis

C

Reproduce

D

Grow



3/5



5 min



Hint

Q : The productivity can be indicated by:

A

Consumption of  $\text{CO}_2$ 

B

Evolution of  $\text{CO}_2$ 

C

Consumption of  $\text{O}_2$ 

D

Evolution of  $\text{N}_2$



4/5



5 min



Hint

Q : Productivity of an ecosystem can be indicated by consumption of:

A

Oxygène

B

Carbon monooxide

C

Carbon dioxide

D

Nitrogen



5/5



5 min



Hint

Q : The productivity of aquatic ecosystem is basically determined by:

A

Light &amp; oxygen

B

Nutrients &amp; oxygen

C

Light &amp; nutrients

D

Oxygen supply



Correct



Unattempted



Incorrect



1/5

Q : Fresh water ecosystem covers less than-----of earth crust.



2%



4%



1%



6%

### Explanation

Almost 97% of earth planet is in ocean, 2% in frozen ice caps and remaining less than 1% is fresh water.



Correct



Unattempted



Incorrect



2/5

Q : Spiny projection on planktonic creatures help to:



Keep them from sinking



Increase surface area for photosynthesis



Reproduce



Grow

## Explanation

Spiny projection on planktonic creatures are found in nearly every freshwater and saltwater habitat which help to keep them from sinking.



Correct



Unattempted



Incorrect



3/5

Q : The productivity can be indicated by:

Consumption of  $\text{CO}_2$ Evolution of  $\text{CO}_2$ Consumption of  $\text{O}_2$ Evolution of  $\text{N}_2$ 

## Explanation

Productivity is actually rate of biomass generation in ecosystem which can be estimated by evolution of oxygen and consumption of carbon dioxide.



Correct



Unattempted



Incorrect



4/5

Q : Productivity of an ecosystem can be indicated by consumption of:



Oxygène



Carbon monooxide



Carbon dioxide



Nitrogen

## Explanation

Productivity is actually rate of biomass generation in ecosystem which can be estimated by evolution of oxygen and consumption of carbon dioxide.





Correct



Unattempted



Incorrect



5/5

Q : The productivity of aquatic ecosystem is basically determined by:



Light &amp; oxygen



Nutrients &amp; oxygen



Light &amp; nutrients



Oxygen supply

## Explanation

Productivity is variable with the depth of water due to light availability.



## QUIZZES

### Practice Test 95



5 Questions



5 min

#### Topics

Temperate Deciduous Forests

[Start Quiz](#)



1/5



5 min



Hint

Q : The biome, which has very fertile soil, rich in organic matter with maximum water holding capacity is:



Alpine forest



Temperature deciduous forest



Grassland



Desert



2/5



5 min



Hint

Q : In temperate deciduous forest temperature ranges from:



6°C - 30°C



4°C - 30°C



8°C - 20°C



8°C - 40°C



3/5



5 min



Hint

Q : Rhesus monkey is found in:

A

Temperate deciduous forest

B

Grassland ecosystem

C

Desert ecosystem

D

Tundra ecosystem



4/5



5 min



Hint

Q : Ecosystem found in Shogran and Neelum valley is:

A

Temperate deciduous forest

B

Coniferous forest

C

Grassland

D

Tundra



5/5



5 min



Hint

Q : Pronounced wet and dry season or distinct summer and winter is feature of:



Tundra



Grassland



Tropical rain forest



Temperate deciduous forest



Correct



Unattempted



Incorrect



1/5

Q : The biome, which has very fertile soil, rich in organic matter with maximum water holding capacity is:



Alpine forest



Temperature deciduous forest



Grassland



Desert

## Explanation

Temperate deciduous forest are present in Neelam valley and Shogran. During dry season they shed their leaves to prevent water loss. Leaves of plants decomposed in soil to maintain soil nutrients and texture.







Correct



Unattempted



Incorrect



2/5

Q : In temperate deciduous forest temperature ranges from:



6°C - 30°C



4°C - 30°C



8°C - 20°C



8°C - 40°C

## Explanation

In temperate deciduous forest distinct summer and winter seasons exist. In summer temperature is average but in winter temperature often fall below freezing.



Correct



Unattempted



Incorrect



3/5

Q : Rhesus monkey is found in:



Temperate deciduous forest



Grassland ecosystem



Desert ecosystem



Tundra ecosystem

## Explanation

A wide variety of mammals, birds, insects and reptiles can be found in a deciduous biome.



Correct



Unattempted



Incorrect



4/5

Q : Ecosystem found in Shogran and Neelum valley is:



Temperate deciduous forest



Coniferous forest



Grassland



Tundra

## Explanation

Temperate deciduous forest are present in Neelum valley and Shogran. During dry season they shed their leaves to prevent water loss. Leaves of plants decomposed in soil to maintain soil nutrients and texture.





Correct



Unattempted



Incorrect



5/5

Q : Pronounced wet and dry season or distinct summer and winter is feature of:



Tundra



Grassland



Tropical rain forest



Temperate deciduous forest

## Explanation

The average temperature in temperate deciduous forests is  $10^{\circ}\text{C}$ . Summer are mild, and average about  $21^{\circ}\text{C}$ , while winter temperature are often well below freezing.





## QUIZZES

### Practice Test 96



5 Questions



5 min

#### Topics

Coniferous Alpine and Boreal Forests

[Start Quiz](#)



1/5



5 min



Hint

Q : Coniferous forest located at high latitude are called:



Alpine



Boral



Taiga



Prairies



2/5



5 min



Hint

Q : Coniferous forests located at high altitude are called:

A

Boreal

B

Alpine

C

Arctic

D

Tundra



3/5



5 min



Hint

Q : Northern coniferous forests are called:



Alpine



Boreal



Taiga



Prairies





4/5



5 min



Hint

Q : *Taxus baccata*, *Pinus wallichian*, *Bereris lyceum* are the plants of:



Temperate deciduous forest



Coniferous forests



Grassland



Tundra



5/5



5 min



Hint

Q : All of the following are adaptations in coniferous plants to reduce water loss except:

A

Succulent plant body

B

Leaf drop

C

Needle shaped leaves

D

Small plant body



Correct



Unattempted



Incorrect



1/5

Q : Coniferous forest located at high latitude are called:



Alpine



Boral



Taiga



Prairies

## Explanation

Forest located at high altitude are called alpine, while taiga (woody tree) and prairies (non woody plants) are included in grassland ecosystem.





Correct



Unattempted



Incorrect



2/5

Q : Coniferous forests located at high altitude are called:



Boreal



Alpine



Arctic



Tundra

## Explanation

Coniferous forest at high latitude are called boreal.



Correct



Unattempted



Incorrect



3/5

Q : Northern coniferous forests are called:



Alpine



Boreal



Taiga



Prairies

## Explanation

*Taiga* generally referred to in North America as *boreal forest* or snow forest, is a *biome* characterized by coniferous forests consisting mostly of pines.



Correct



Unattempted



Incorrect



4/5

Q : *Taxus baccata*, *Pinus wallichian*, *Bereris lyceum* are the plants of:

A

Temperate deciduous forest

B

Coniferous forests

C

Grassland

D

Tundra

## Explanation

These plants are found in moist habitat like northern areas of Pakistan.



Correct



Unattempted



Incorrect



5/5

Q : All of the following are adaptations in coniferous plants to reduce water loss except:



Succulent plant body



Leaf drop



Needle shaped leaves



Small plant body

## Explanation

The succulent plants are the plants that usually retain water in arid climate or soil condition.



## QUIZZES

### Practice Test 97



5 Questions



5 min

#### Topics

The Grassland Ecosystem, Desert Ecosystem,  
Tundra Ecosystem

[Start Quiz](#)





1/5



5 min



Hint

Q : Which biome has the richest soil with nutrients and can be converted into agriculture?



Desert ecosystem



Tropical rain forest



Grassland



Coniferous forest



2/5



5 min



Hint

Q : Tropical grass lands are:



Alpine



Boreal



Swanna



Prairies



3/5



5 min



Hint

Q : In Sindh, the desert ecosystem is called:



Thal



Thar



Sahara



Gobi



4/5



5 min



Hint

Q : Perhaps the most fragile of all the biomes, because of its short growing season is:



Tundra



Desert



Gross land



Temperate deciduous



5/5



5 min



Hint

Q : Tundra and coniferous forests always occur in the:

A

Southern hemisphere

B

Northern hemisphere

C

Tropics

D

Poles



Correct



Unattempted



Incorrect



1/5

Q : Which biome has the richest soil with nutrients and can be converted into agriculture?



Desert ecosystem



Tropical rain forest



Grassland



Coniferous forest

## Explanation

In grassland ecosystem various types of grass species present, which after growing season decomposed by certain types of decomposers to increase soil fertility.





Correct



Unattempted



Incorrect



2/5

Q : Tropical grass lands are:



Alpine



Boreal



Swanna



Prairies

## Explanation

Tropical grassland or savanna of Africa are best known but also present in South America, India and Australia.





Correct



Unattempted



Incorrect



3/5

Q : In Sindh, the desert ecosystem is called:



Thal



Thar



Sahara



Gobi

## Explanation

The deserts of Mianwali and Bukhar is Thal, while Sahara and Gobi deserts present in Africa and China.







Correct



Unattempted



Incorrect



4/5

Q : Perhaps the most fragile of all the biomes, because of its short growing season is:



Tundra



Desert



Gross land



Temperate deciduous

## Explanation

In tundra treeless region present. In this ecosystem climatic conditions are worst like extremely low temperature, little precipitation, low nutrients and short growing season.





Correct



Unattempted



Incorrect



5/5

Q : Tundra and coniferous forests always occur in the:

A

Southern hemisphere

B

Northern hemisphere

C

Tropics

D

Poles

## Explanation

Tundra region found in Northern and southern hemisphere between ice-covered polar and the taiga or coniferous forest.



## QUIZZES

### Practice Test 98



5 Questions



5 min

#### Topics

Renewable and Non-Renewable Resources,  
Energy

[Start Quiz](#)



1/5



5 min



Hint

Q : Which one is not included in renewable resources?



Water



Wildlife



Forests



Fossil fuel



2/5



5 min



Hint

Q : All of the following are inexhaustable energy resources except:

A

Solar energy

B

Wind

C

Oil

D

Hydropower



3/5



5 min



Hint

Q : Air in motion is called:



Atmosphere



Wind



Gas



Weather



4/5



5 min



Hint

Q : Geothermal out bursts releases:



Ice



Boron



Oxides of lead



CO



5/5



5 min



Hint

Q : During fossilization, dead plants are first converted into:

A

Peat

B

Lignite

C

Coal

D

Ash





Correct



Unattempted



Incorrect



1/5

Q : Which one is not included in renewable resources?



Water



Wildlife



Forests



Fossil fuel

## Explanation

Oil, natural gas and coal are called fossil fuels and are exhaustible sources of energy therefore are referred as non-renewable resources, while air, water and land can be recycled in nature and thus are referred as renewable resources.





Correct



Unattempted



Incorrect



2/5

Q : All of the following are inexhaustable energy resources except:



Solar energy



Wind



Oil



Hydropower

## Explanation

Oil, natural gas and coal are exhaustable resources of energy therefore are referred as non-renewable resources, while solar energy, wind, hydropower, ocean thermal gradient, waves and geothermal energy are inexhaustable energy resources.





Correct



Unattempted



Incorrect



3/5

Q : Air in motion is called:

A

Atmosphere

B

Wind

C

Gas

D

Weather

## Explanation

The natural movement of the air, especially in the form of a current of air blowing from a particular direction is called wind.



Correct



Unattempted



Incorrect



4/5

Q : Geothermal out bursts releases:



Ice



Boron



Oxides of lead



CO

## Explanation

Volcanoes, hot springs and geysers allow the escape of hot substances from the inside of the earth. The natural heat trapped underground, is called geothermal energy. It is free and can last for a long time.



Correct



Unattempted



Incorrect



5/5

Q : During fossilization, dead plants are first converted into:



Peat



Lignite



Coal



Ash

### Explanation

Dead plants  $\Rightarrow$  Peat  $\Rightarrow$  Lignite  $\Rightarrow$  Coal  $\Rightarrow$  Carbon  
Ash



Correct



Unattempted



Incorrect



5/5

Q : During fossilization, dead plants are first converted into:



Peat



Lignite



Coal



Ash

## Explanation

Plants  $\Rightarrow$  Peat  $\Rightarrow$  Lignite  $\Rightarrow$  Coal  $\Rightarrow$  Carbon dioxide  
 $\Rightarrow$  Ash + Smoke



## QUIZZES

### Practice Test 99



4 Questions



5 min

#### Topics

Deforestation, Afforestation, Importance of  
Forests

[Start Quiz](#)





1/4



5 min



Hint

Q : Which of the following act as environmental buffer?

A

Deserts

B

Forests

C

Oceans

D

Lakes





2/4



5 min



Hint

Q : The destruction of forests leaves the soil barren and this is called:

A

Deforestation

B

Forestation

C

Afforestation

D

Reforestation



3/4



5 min



Hint

Q : \_\_\_\_\_ is establishment of new forests where no forests existed previously.



Deforestation



Afforestation



Reforestation



Desertification



4/4



5 min



Hint

Q : A tree is:

A

CO<sub>2</sub> sink

B

O<sub>2</sub>-Source

C

Producer

D

All of these



Correct



Unattempted



Incorrect



1/4

Q : Which of the following act as environmental buffer?

A

Deserts

B

Forests

C

Oceans

D

Lakes

## Explanation

Trees intercept heavy rainfall and release the water steadily and slowly and thus prevents soil erosion, silting up of lakes and roots hold the soil in place.



Correct



Unattempted



Incorrect



2/4

Q : The destruction of forests leaves the soil barren and this is called:



Deforestation



Forestation



Afforestation



Reforestation

## Explanation

Clearance of vast areas of forest is called deforestation. Deforestation is replaced by reforestation. Afforestation is the establishment of new forests where no forests existed previously. Forestation is the act of planting or cultivating a forest.





Correct



Unattempted



Incorrect



3/4

Q : \_\_\_\_\_ is establishment of new forests where no forests existed previously.



Deforestation



Afforestation



Reforestation



Desertification

## Explanation

Clearance of vast areas of forest is called deforestation. Deforestation is replaced by reforestation. Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture.



Correct



Unattempted



Incorrect



4/4

Q : A tree is:

CO<sub>2</sub> sinkO<sub>2</sub>-Source

Producer



All of these

## Explanation

Trees use carbon dioxide (sink) for the process of photosynthesis (producer) and release oxygen during respiration (source).



## QUIZZES

### Practice Test 100



5 Questions



5 min

#### Topics

Pollution and Its Types, Ozone Layer  
Depletion

[Start Quiz](#)





1/5



5 min



Hint

Q : Burning of fossils fuel is a source of:



Ozone



Chlorofluorocarbon



Oxides of Nitrogen



Lead compounds



2/5



5 min



Hint

Q : Power stations and fossil fuels produce:



CFCs



Sulphur dioxide



Oxygen



Nitrogen



3/5



5 min



Hint

Q : The decline thickness of ozone layer is caused by increasing level of:

A

Hydrophytes

B

Nitrocarbon

C

Chlorofluorocarbon

D

Chlorine



4/5



5 min



Hint

Q : As chlorofluorocarbons rise to the atmosphere, the ultraviolet rays cause to release:

A

Fluorine

B

Chlorine

C

Carbon

D

Hydrogen



5/5



5 min



Hint

Q : Ozone in the upper layer of atmosphere that filters:

A

IR radiations

B

UV radiations

C

 $\beta$  radiations

D

 $\gamma$  radiations



Correct



Unattempted



Incorrect



1/5

Q : Burning of fossils fuel is a source of:



Ozone



Chlorofluorocarbon



Oxides of Nitrogen



Lead compounds

## Explanation

Sulphur dioxide, carbon dioxide and nitrogen dioxide are some of the gases produced during burning of fossil fuels.



Correct



Unattempted



Incorrect



2/5

Q : Power stations and fossil fuels produce:

A

CFCs

B

Sulphur dioxide

C

Oxygen

D

Nitrogen

## Explanation

Sulphur dioxide, carbon dioxide and nitrogen dioxide are some of the gases produced during burning of fossil fuels.





Correct



Unattempted



Incorrect



3/5

Q : The decline thickness of ozone layer is caused by increasing level of:



Hydrophytes



Nitrocarbon



Chlorofluorocarbon



Chlorine

## Explanation

When ultraviolet light waves (UV) strike CFC ( $\text{CFCl}_3$ ) molecules in the upper atmosphere, a carbon-chlorine bond breaks, producing a chlorine (Cl) atom. The chlorine atom then reacts with an ozone ( $\text{O}_3$ ) molecule breaking it apart and so destroying the ozone.







Correct



Unattempted



Incorrect



4/5

Q : As chlorofluorocarbons rise to the atmosphere, the ultraviolet rays cause to release:



Fluorine



Chlorine



Carbon



Hydrogen

## Explanation

When ultraviolet light waves (UV) strike CFC ( $\text{CFCl}_3$ ) molecules in the upper atmosphere, a carbon-chlorine bond breaks, producing a chlorine (Cl) atom. The chlorine atom then reacts with an ozone ( $\text{O}_3$ ) molecule breaking it apart and so destroying the ozone.



Correct



Unattempted



Incorrect



5/5

Q : Ozone in the upper layer of atmosphere that filters:



IR radiations



UV radiations

 $\beta$  radiations $\gamma$  radiations

## Explanation

Ozone ( $O_3$ ) is bluish, explosive and highly poisonous gas. It filters harmful UV rays coming from sun.





## QUIZZES

### Practice Test 101



5 Questions



5 min

#### Topics

Acid Rain, Water Pollution

[Start Quiz](#)



1/5



5 min



Hint

Q : Stone monuments are being eroded due to stone cancer by:

A

Greenhouse effect

B

Acid rain

C

Ozone depletion

D

Global warming



2/5



5 min



Hint

Q : Stone cancer is the result of:

A

Soil pollution

B

Water pollution

C

Air pollution

D

Stone pollution



3/5



5 min



Hint

Q : Acid rain contains:

A

Nitric acid

B

Sulphuric acid

C

Sulphurus acid

D

All of these



4/5



5 min



Hint

Q : Not present in acid rain:

A

Nitric acid

B

Nitrous acid

C

Sulphuric acid

D

Phosphoric acid



5/5



5 min



Hint

Q : Which of the following is not removed completely by sewage treatment?

A

C-compounds

B

Decomposing materials

C

N-wastes

D

Phosphates





Correct



Unattempted



Incorrect



1/5

Q : Stone monuments are being eroded due to stone cancer by:



Greenhouse effect



Acid rain



Ozone depletion



Global warming

## Explanation

Sulphur dioxide and nitrogen dioxide emitted in the air during the burning of fossil fuels, combined with water vapors in the atmosphere forms acids that fall in the form of rain and erode the stones and thus result is stone cancer.





Correct



Unattempted



Incorrect



2/5

Q : Stone cancer is the result of:



Soil pollution



Water pollution



Air pollution



Stone pollution

## Explanation

Sulphur dioxide and nitrogen dioxide emitted in the air during the burning of fossil fuels, combined with water vapors in the atmosphere forms acids that fall in the form of rain and erode the stones and thus result is stone cancer.





Correct



Unattempted



Incorrect



3/5

Q : Acid rain contains:

A

Nitric acid

B

Sulphuric acid

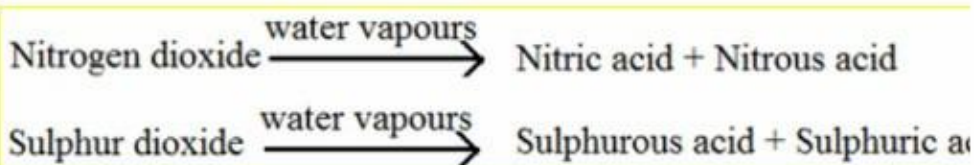
C

Sulphurus acid

D

All of these

## Explanation





Correct



Unattempted



Incorrect



4/5

Q : Not present in acid rain:

A

Nitric acid

B

Nitrous acid

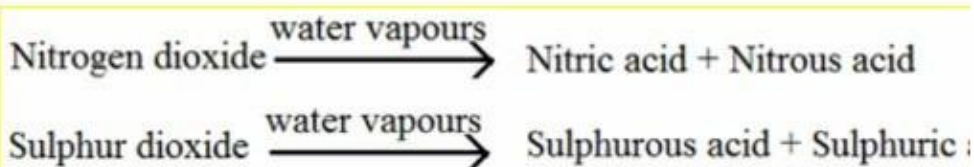
C

Sulphuric acid

D

Phosphoric acid

## Explanation



1

2

3

4

5





Correct



Unattempted



Incorrect



5/5

Q : Which of the following is not removed completely by sewage treatment?



C-compounds



Decomposing materials



N-wastes



Phosphates

## Explanation

Various detergents enter the water from houses and laundries to pollute it with various harmful effects. Some detergents contain a lot of phosphate. This is not removed by the sewage treatment and is discharged into rivers resulting in eutrophication.



## QUIZZES

### Practice Test 102



5 Questions



5 min

#### Topics

Eutrophication or Algal Bloom, Industrial Effluents, Insecticides, Herbicides and Fertilizers

[Start Quiz](#)



1/5



5 min



Hint

Q : Some detergents contain a lot of:



Sulphur



Carbon



Phosphate



Carbonates





2/5



5 min



Hint

Q : Scum in eutrophication is formed by:

A

Blue green algae

B

Fungi

C

Bacteria

D

Virus





3/5



5 min



Hint

Q : Effluent is:

A

Harmful liquid waste from industry

B

Dead Algae on the lakes

C

Result of over usage of air conditioners

D

Chemical that can form ozone layer



4/5



5 min



Hint

Q : The chemical, which destroys agricultural pests or competitors is called:



Bio pesticide



Germicide



Herbicide



Pesticide



5/5



5 min



Hint

Q : The pesticides that kill the fungi:

A

Fungicides

B

Herbicides

C

Insecticides

D

Weedicides



Correct



Unattempted



Incorrect



1/5

Q : Some detergents contain a lot of:



Sulphur



Carbon



Phosphate



Carbonates

## Explanation

Phosphates from washing powders can cause excessive enrichment of water with nutrients that speed up the natural process of eutrophication.



Correct



Unattempted



Incorrect



2/5

Q : Scum in eutrophication is formed by:



Blue green algae



Fungi



Bacteria



Virus

## Explanation

Scum is the layer on the surface of a liquid. Vast quantities of algae feed and reproduce on the nutrients causing the water to turn green during eutrophication.



Correct



Unattempted



Incorrect



3/5

Q : Effluent is:



Harmful liquid waste from industry



Dead Algae on the lakes



Result of over usage of air conditioners



Chemical that can form ozone layer

## Explanation

Factories sometimes turn waterways into open sewers by dumping oil, toxic chemicals, and other harmful liquids (called effluents) into them.





Correct



Unattempted



Incorrect



4/5

Q : The chemical, which destroys agricultural pests or competitors is called:

A

Bio pesticide

B

Germicide

C

Herbicide

D

Pesticide

## Explanation

Germicide is a substance or other agent which destroys harmful microorganisms. The term bio pesticides defines compounds that are used to manage agricultural pests by means of specific biological effects rather than as broader chemical pesticides. Herbicide is a substance that is toxic to plants, used to destroy unwanted

1

2

3

4

5







Correct



Unattempted



Incorrect



5/5

Q : The pesticides that kill the fungi:



Fungicides



Herbicides



Insecticides



Weedicides

## Explanation

The pesticides that kill the insects is called Insecticides. *Herbicides* used to control small unwanted plants. Weedicides are used to control weeds in particular.

